Kleisthenes and the Ascent of Democracy

Krishna K. Ladha <kl555@nyu.edu>
Department of Politics, New York University, New York, NY 10003

Abstract

Who is Kleisthenes? What is democracy? How did it come into being?   Kleisthenes conceived democracy as a *strategy* to attain power by proposing the Athenian constitution as an instrument of a lasting compromise between two militarily equipped factions of Athens: the hoplites and the nobility. Based on the history of Athens, this paper formulates a dynamic game of complete information that Kleisthenes faced in the sixth century BCE. The innovative solution to the game is a new system of government: democracy. To implement democracy, Kleisthenes faced two problems: the problem of constitution design and the problem of factions that lay beyond constitution. The solution to the first is the Athenian constitution, and the solution to the second is the tribal reform. The main accomplishments of the Athenian democracy are the following: (a) it offered domestic peace, economic well being, and the capability to withstand or dominate foreign powers, and (b) it was self-enforcing. The paper seeks to highlight Kleisthenes's thinking, a thinking that reflects a great command of the economics of information, mechanism design and game theory.

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> Cleisthenes … [established] laws and a constitution that was admirably balanced so as to promote harmony between the citizens and security for the whole state.
>
> Plutarh (1960, p. 167)

Introduction

Kleisthenes installed democracy in Athens in 507 BCE. Herodotus catalogues Kleisthenes's reforms in The Histories, and so does Aristotle in The Athenian Constitution and in Politics. Often flawed, these are the only original sources about Kleisthenes. Historians are content describing Kleisthenes's actions interspersed with analytical comments. While some historians recognize the greatness of Kleisthenes's work, many also view it as an enterprise in self-interest that simply extends Solon's reforms of 594 (henceforth, BCE is suppressed). Plutarch, while uncannily accurate in the quote above, probably did not write a biography of Kleisthenes. Ultimately Kleisthenes received little recognition as a thinker, pioneer and a political entrepreneur outside of classical historians. A search of jstor reveals that the most recent article in American Political Science Review containing the expression "Kleisthenes or Cleisthenes" in the *text* was published more than seventy five years ago in 1926; actually it is in footnote 8. American Journal of Political Science drew a blank, as did the economics journals of jstor. Philosophy journals of jstor do contain a handful of articles containing the name Kleisthenes, but nothing significant about Kleisthenes.

PS: Political Science and Quarterly (1993) celebrated 2500th anniversary of democracy with contributions from historians. Bernard Grofman, a reputed political scientist, wrote the Editor's introduction. Grofman asks: "If Cleisthenes is so important, why have I never heard of him?" He adds: "Despite its relatively extensive discussion of Athenian Democracy, Cleisthenes goes unmentioned in Dahl (1989).[1] His name is equally conspicuous by its absence in virtually everything else ever written about democracy by political scientists." Moreover, Grofman asks: "why should I celebrate Athenian democracy when I know from both Madison and Hamilton in the Federalist Papers that it

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[1] To be fair, Dahl does mention Cleisthenes on page 14 although not in the Index. I must reluctantly submit, however, that I have difficulty relating with Dahl's desciption of Athenian democracy. Dahl (1989, 18) lists six requirements that must be met for a democratic order in the Greek view. I find the first five requirements as controversial if not inaccurate.

was really mob rule, an example to be avoided at all costs in shaping a constitution for a republic in search of stability and good government?" These are good questions.

The fact is Kleisthenes *conceived and implemented* democracy in Athens extending power to the people. His proposal for social and political reforms, and his call for an overthrow of oligarchy to install democracy, culminated in the Athenian revolution. He laid the foundation for much that happened in Athens in the next 186 years. Although Herodotus calls him the father of democracy, the relative obscurity of Kleisthenes is a mystery. We do not even know how handsome he was! Upon inquiry, the Greek department of the British Museum said no representation of Kleisthenes is known to exist.

What did Kleisthenes do and why? What was his innovation? What was his *game* plan? Why did he succeed? Why in 507 BC? Are there lessons for the modern times? What is democracy? What are the preconditions for its success? While the factual questions are more or less answered in the literature, the deeper questions require far more work.

This paper has three goals: (1) to explain the ascent of the Athenian democracy in the language of game theory; (2) to reconsider the accomplishments of Kleisthenes, the architect of the constitution that powered the Athenian democracy; and (3) to define democracy based on the Athenian evidence. Let me elaborate on each point.

(1) The ascent of democracy in the language of game theory

At the heart of the rise of Athenian democracy is a long history of factional battles that in its climactic period (near the end of the sixth century BC) may be represented as a dynamic game of complete information. Embedded in the game are four problems facing Kleisthenes:

> (1a) How to *dislodge* the incumbent Athenian oligarchy representing a section of the nobility?
> (1b) How to strike a *balance* between warring factions of Athens (the people and the nobility) to promote a united Athens for peace and security?
> (1c) How to make *credible promises* to the warring factions?
> (1d) What system of government to install such that it *survives* in the anarchic world of polis? How?

Solutions to (1a) and (1c) enable Kleisthenes to attain power, (1b) and (1d) allow him and his successors to retain power. Kleisthenes's solution had two parts: *tribal reforms* to transform the political landscape, and *constitutional democracy* to balance power between competing factions. Note that (1a) to (1d) are precisely the questions that the English faced before the Glorious revolution of 1660 (North and Weingast, 1989), and the Americans faced at the time of the Philadelphia Constitutional Convention in 1787 (Riker, 19??).

(2) Accomplishments of Kleisthenes.

As I see it, the main accomplishment of Kleisthenes is that he made the desirable implementable: he produced a great confluence of the normative with the positive. It is precisely on this count that Plato, Kant, Marx, Rawls and others failed: their specified means do not attain their specified goals. While Adam Smith's butcher and baker, acting in self-interest, implement the socially desirable, difficulty arises when the pursuit of the socially desirable is not in the individual self-interest. Kleisthenes's proposal addresses this difficulty with great success: his ideas are both profound and unprecedented, and his success in implementing them exemplary.

To understand Kleisthenes, it is essential to distinguish his constitution from the forces acting upon it. If these forces become extreme (such as dominance of one faction), there is not much a constitution can do about it; a constitution cannot solve a society's deep-seated problems (Ordeshook, 1997, p. 5). Democracy did become unruly in Athens just as Plato, Madison and Hamilton said, but not because of Kleisthenes's constitution. It was because of the dominance of one faction or the other leading to the gyrations of the Athenian democracy, as I will show. Refusing to study the Athenian constitution because its democracy became unruly would be akin to refusing to study the design of the Titanic because it sank after hitting an iceberg. Yet every effort must be made to avoid the iceberg. Madison did it by seeking a large republic with many factions such that none would become dominant.[2] What could Kleisthenes do? Kleisthenes lacked the luxury of Madison's landscape populated by states sharing similar, if not identical, governments. He had to remain content with Attica with probably 30 to 40,000 male citizens covering an area smaller than Rhode Island. Like Madison, but 2300 years before him, Kleisthenes faced two problems: the problem of constitution design and the problem of factions that lay beyond constitution. The solution to the first is the Athenian constitution, and the solution to the second is the tribal reform.

The tribal reforms achieve the following normative goals: diminish the monopoly power of the nobility over politics; more power to the people; extend citizenship to metics (resident aliens); promote trade and competition; increase equality, liberty and participation; separate politics from religion; create cross-cutting cleavages for greater harmony; pursue general good over local good; and lay the foundation for military reforms to survive foreign aggression. Essentially the goal of the reforms is to decentralize power for greater prosperity, peace, freedom, security and the pursuit of the common goal. Empty promises? No. The proposal for tribal reforms had a remarkable property: it was self-executing! Indeed, the reforms were completed over several years after the revolution; well after Kleisthenes was gone. Still each reader should decide for

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[2] Despite becoming a large republic, the US also became "unruly" when one party dominated all branches of the government, ultimately leading to the progressive movement; see Miller (1989). The problem was beyond Madison's constitution. Miller (1989) and Filippov, Ordeshook and Shvetsova (2003) convincingly argue that a constitution alone cannot produce credible commitment: competition between political parties is essential for proper functioning of a democracy.

himself whether Kleisthenes's proposal does two things: sets lofty goals (normative) and attains them (positive).

The second element of Kleisthenes's plan is the famed Athenian constitution. Although erroneously remembered for being only a direct democracy, it had all the great properties attributed to modern constitutions. Kleisthenic constitution channeled factional powers through competing institutions (Areopagus v. the People's Assembly, the Council of 500 v. the People's Assembly, the Archons v. the People's Assembly, Areopagus v. the Council of 500, Areopagus v. the jury Courts, and even the Assembly v. the jury Courts (Hansen carefully points out that the Assembly and the jury court were not the same because the age restrictions were different)), laid down procedures for elections and policymaking, promoted the pursuit of general good over local good (the system of prytaneis), balanced ambition against ambition (elections, competing institutions), and did not attempt to perfect human beings (by giving freedom to pursue private ends; compare with Sparta). Kleisthenes successfully began the tradition that people could change their leaders through competitive elections, and introduced the system of ostracism to safeguard against tyranny. His constitution maintained unity between factions and served as an anchor to which Athens repeatedly returned after factional imbalances swayed it against either the nobility or the people. It is *the* Constitution that created a world captured in "The Funeral Oration" attributed to Perikles, written by Thucydides. When Ephialtes and Perikles swayed too far from it, democracy eventually collapsed and was restored only by returning to the Kleisthenic balance: once in 411 and again in 404. Ultimately, the Kleisthenic Constitution persevered in the wake of domestic violence and external aggression from 507 to 322.

In brief, Kleisthenes prepared Athens for the victories of Marathon (led by Miltiades) and Salamis (led by Themistocles) and laid the foundation for a world in which trade, science, philosophy and art could flourish. As a blemish, the persistence of slavery and lack of women's rights are cited as problems of the Athenian democracy. Grofman (1983) asks tongue-in-cheek: "How can a militaristic society built on the backs of slaves and the revenues of imperialism, in which women couldn't own property or participate in politics, ever be something to celebrate?!" The trouble is that the opposing factions, the nobility and hoplites, preferred the status quo on these issues. There is nothing Kleisthenes could do about it. If men and women had equal rights, Kleisthenes's Constitution would apply just as well. Concerning why to celebrate a militaristic society, it seems to me that democracy had two "parents": (1) competing factions (made possible by the rise of hoplites who could *militarily* challenge the nobility for a share of the power, while neither faction becoming too powerful to annihilate the other), and (2) Kleisthenes's conception of democracy enabling competing factions to co-exist and grow! All things considered, it is necessary to focus on the mathematical structure of Kleisthenes's thinking, a thinking that reflects a great command of the economics of information, mechanism design and game theory.

John V.A. Fine (1983, p.243), whose book The Ancient Greeks combines history with economic reasoning and the art of storytelling, states:

Cleisthenes remains one of the great enigmas of Greek history. The man who established the secular state of Athens and laid the framework for the future of democracy so well that that framework endured for centuries … At the height of his powers he disappeared totally from the stage … Although he was remembered in the fifth century as the founder of a democratic constitution, in the fourth century he was more and more ignored, except by Aristotle … The measure of his genius, however, can be judged from the simple fact that Athens would not have been what it was in the fifth and fourth centuries had Cleisthenes not carried through his remarkable reorganization of the state.

This essay seeks to affirm Fine's point with the help of the modern political economy.

(3)   The meaning of democracy

In the game Kleisthenes played, *democracy is a strategy*. Among the well-known strategies are monarchy (one veto player), oligarchy (several veto players) and democracy (many veto players) with many shades within each. Each is a way to preserve domestic peace, impart justice, manage interests, ward off external threat and pursue conquest. The success of each system depends on its ability to generate economic surplus and thereby defense capabilities to face off competing system in a given environment. If democracy were to consistently fail in producing more surplus and security than a competing system of government, democracy would probably cease to be a winning strategy and would perish. Democracy was a winning strategy in 507 Athens, but not so by 322/1 BC when Macedonia extinguished it. The big point is that democracy has to be understood in a world of *inter-societal competition* in which wars are a part of the game. Democracy cannot be fully understood by examining its properties within a single society assumed to be in a state of peace. For the implications of this point for the ideas of Arrow and Riker, see Ladha (2003).

Before elaborating the three points of this paper, I had asked: What was Kleisthenes's *game* plan and why did he succeed? So the first order of business is to specify the game Kleisthenes played including the players, their strategies and their payoffs, followed by Kleisthenes's proposal. To specify the players, their strategies and payoffs, I need to dwell into the history of ancient Athens. Section II offers a rapid-fire history leading up to Kleisthenes with somewhat detailed comments on the reforms of Solon and the administration of Pisistratus. Section III graphically represents key events of Athens based on a model due to Powell (1999); a summary of Powell's model is presented for ready reference. Section IV presents a dynamic game of complete information that Kleisthenes faced, including its main problem of credible commitment. Section V presents solution to the commitment problem: Kleisthenes's constitution and tribal reforms. Section VI presents the gyrations in Athenian democracy and tests the claim that the fall and rise of the Athenian democracy were directly linked to the fall and recovery of the Council of Areopagus, the institution that traditionally represented the nobles. And the fall of Areopagus was linked to structural changes in Athens. In other words, the gyrations in the Athenian democracy were due to factional imbalances, not Kleisthenes's constitution. Conclusions follow.

II.   A brief History

II.1   Nobility and the rise of hoplites[3]

Greece is poor in natural sources. To support its rising population, Greek colonization began in the eighth century and within the next two centuries they settled along much of the coastline. A king, more like a chieftain, helped acquire and defend the new territory. Most kings, lacking the resources for the bureaucracy and military to install a dynasty, invited their co-equals to join the king's council of nobles. After the settlement, however, when the co-equals wished to decentralize king's power more than they needed him, the nobility replaced the kingship through much of Greece. The nobles, with the resources to raise horses and the leisure to train as cavalry, became the dominant force in the society. They came to acquire much of the fertile land and control of various social institutions that enabled them to monopolize economic and political power. But there was another phenomenon in the making: the rise of the hoplites in the seventh century. Let me attend to it.

Greeks imported food, copper, iron, timber, ivory, dried fish, spices, incense, and paid by the export of wine, olive oil, pottery, textiles and arms. Coinage, introduced around 600 B.C., expedited trading. Farmers and artisans often carried their goods abroad and returned with the imports some of which they sold to the nobles. Trade created mobile wealth, in the form of gold, silver and manufactured goods, which changed the strategic relationship between the nobles and the non-nobles: whereas owners of immovable wealth sought nobility's favors, the nobility sought the owners of movable wealth. Trade also changed the labor market: *thetes* (the day laborers) found greater opportunities and wages in farming, manufacturing and seafaring.   In turn, increased income gave many farmers and traders the resources to buy their own armament to join the newly rising hoplite force. Hoplites changed the complexion of the defense forces: they were needed to fight the enemy who used hoplites. Soon hoplites fought alongside noble cavalries. The hoplites trained together as they had to fight in the phalanx formation with their lives depending on each other. In a short time they emerged as an organized faction competing with the nobles for domestic political power through much of Greece. *Democracy was in the air*. The demands for economic and political reforms, backed by hoplite power, grew louder and more violent producing a series of crises in Athens. To set the stage for Kleisthenes, the relevant crises are: Kylon's attempt to set up a tyranny (636 or 632), Drakon's laws (621), Solon's reforms (594) and Pisistratus's tyranny (561-527, barring two periods).

Before describing the crises of Athens, this seems a good time to introduce the idea of a tyrant. A tyrant meant a ruler, and tyranny his regime.[4] A tyrant was a political entrepreneur who, with the help of hoplites and mercenaries, seized power from the nobility. Thus, unlike a king who relied on the nobility, a tyrant relied on the newly rich: hoplites and traders. A tyrant needed resources to stay in power, hoplites needed land

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[3] Section II.1 is based on Fine (1983).
[4] The explanation of a tyrant is based on Fine (1983).

reform, traders needed protection to do business, and laborers needed a source of income. The coalition of tyrant, hoplites, traders and (some) laborers not only offered each other support for economic and political survival, but also grew the economy.   But success of a tyrant meant less need for his services as the groups he mobilized became stronger and had less need to allow the concentration of power in him. The nobility joined those who no longer needed the tyranny. Usually the second-generation tyrants, perhaps lacking the energy and enterprise of the father, became the targets for removal. The threat of a loss of the regime made tyrants oppressive, giving tyranny the bad name by the end of the sixth century Greece.

Returning to the crises Athens faced, it was in 636 or 632 that Kylon attempted to install a tyranny with the help of his father-in-law who was a tyrant of the neighboring Megara. Kylon captured the Akropolis but the coup failed. The main point to derive from Kylon's coup is that by 632, the hoplite power in Athens had risen enough that Kylon thought he could rule Athens. Although Kylon failed, the message was clear: the nobility had to share power with the hoplites. The written laws of Drakon (621) appear to be a step in power sharing; before Drakon, without written laws, the nobility administered justice, and remembered the law in a way that suited its interest.

II.2 Solon

Drakon's laws were not enough as the hoplite power continued to grow and so did the threat of a tyrant. In 594, Athenians entrusted Solon, by the unanimity of all factions, to find a compromise. The nobility wanted to preserve its power but was willing to compromise, the newly rich wanted a say in the affairs of the state, and the truly poor farmers wanted debt write-off, release from the debt-induced slavery, and land redistribution. Solon could see the threat of migration on the horizon unless he struck a compromise between the nobility and the rest. Indeed, he wanted Athenians, who had migrated to escape the debt trap, to return to Attica.

Solon, about thirty years old (Hansen, 1991, p. 30-31), moved Attica from aristocracy to plutocracy by dividing it into four tribes on the basis of land ownership, not birth. He promulgated specific policies (he cancelled all debts, liberated all citizens who had fallen into slavery, forbade loans with the provision of enslavement, but refused to undertake land reforms), and wrote laws that lasted for more than 100 years. On the Constitutional front he appears to have preserved what he inherited: the system of nine archons (appointed every year) and the Council of *Areopagus*, a permanent body composed exclusively of ex-archons who served for life. He, however, opened Archonship to the top two of his four tribes while disallowing the bottom two tribes, which probably included most of the hoplites and traders (the middle class) and the thetes (the poor), from holding public office. But Solon created people's courts where citizens could appeal the decisions of the magistrates. Finally, Solon may have created a Council of four hundred.

According to Aristotle (Ath. Const., p. 49), "Solon instituted a council of four hundred, one hundred from each tribe." Is it true? The first trace of Solon's Council is found in 411 (more than 180 years after Solon is said to have set up the Council) when the nobility overthrew democracy (more on the overthrow later) and installed a Council of Four Hundred by invoking Solon. Hansen (1991, 31) states, "There can be no doubt that the oligarchs in 411 claimed Solon's alleged Council as their paradigm, and thus it is impossible to tell for certain whether the whole thing was just a propaganda invention that got taken afterwards as history or whether it really did once exist."

To examine closely Solon's reforms, and also to understand Kleisthenes's reforms about a century later, I consider three things: the institution of phratry, a result from development economics and a remark by Riker.

A citizen's family belonged to a clan, several clans formed a *phratry*, several phratries formed a tribe, and several tribes formed a polis; see Meier (1990, 56). *To be a citizen, it was necessary to belong to a phratry; a person who did not belong to a phratry had no rights*. Both commoners and nobles belonged to a phratry with the commoners depending on the nobles for employment, protection and justice. Phratries helped in the conduct of sacrifices and worship, and socialization of citizens into the norms and practices of the group. Thus, phratries were the vehicles for social, economic, religious and *political* activities of its members. Moreover, the army was organized by tribes, consisting of people tied together by phratries.

In the language of development economics, a phratry was an organization for *interlinked markets* in which the *same* agents engaged in *multiple* transactions belonging to different markets; for results on interlinked markets see Bardhan (198?) and Srinivasan (198?). To give an example, a noble may rent land to a non-noble named Strepsiades, provide loan to Strepsiades, employ him as a wage laborer, train his child, employ the child when he grows up, offer protection to Strepsiades and his family and so forth. Clearly, if Strepsiades wants to assert his independence in one of the markets, he may have to pay dearly for it in other markets. In particular, a government policy ostensibly designed to help the poor, has the opposite effect: it helps the rich. Here is an example from modern times: a government subsidy to poor farmers in the form of a low-interest bank loan, actually subsidizes the landlord. Why? The reason is that the landlord, with his local monopoly, would give the tenant his reservation wage at the end of all transaction in all markets. Thus, if the tenant gets subsidy from the government, the landlord knows it and would proceed to change prices in other markets so that ultimately tenant gets his reservation wage, same as before the subsidy: the government subsidy to the poor actually flows to the rich! There are two conclusions to draw.

First, the impact of economic reforms of Solon must have been limited because Solon left phratries intact. Individuals who were freed benefited, but they also lost benefits in other interlinked markets.

Second, there is difficulty in exercising *political independence* with power concentrated in phratry leadership. Members of a phratry (especially the thetes) would be subject to

penalties in interlinked markets if they exercised independence against the local lords. It is quite likely that phratry leadership instituted rules that made acts of defiance observable and thereby punishable. Non-members, viz., the metics, would probably be denied admission to a phratry, and therefore citizenship, on a variety of grounds including religion.

The political implications of a lack of political independence for democracy are serious. Let me quote Riker (1982, p.5): "… democracy implies voting but voting does not imply democracy. Or, voting is a necessary, but not a sufficient, condition of democracy. To render them equivalent, voting must be surrounded with numerous institutions like political partied and free speech, which organize voting into genuine choice." Solon did not surround voting with proper institutions. Even if he created a Council of 400, even if it was elected, and even if all citizens were allowed to vote, the election could not have been a fair election. In contrast, Kleisthenes did by rendering phratries relatively powerless in matters of politics. Consequently, Solon's reforms could hardly be considered in the direction of democracy. The facts suggest that the reforms were not even a compromise.

After Solon declared his reforms there was no peace in Athens, troubles continued. Five years after Solon's reforms in 590/89 no archon could be appointed (we have the expression anarchy) and it happened again in 586/5. In 582/1 the archon would not leave office and had to be forcibly removed after 26 months (Ath. Const. p. 54).

Solon's ideas not only had a bad start, they had a bad end as Pisistratus succeeded in setting up a tyranny on his third attempt (the first two in 561/0 and a few years later failed, the third begun in 546/5 succeeded. The tyranny lasted beyond Pisistratus till his son Hippias was expelled in 511/510 by the Spartans. Let me turn to Pisistratus.

II.3 The rise and fall of Pisistratus

The logic of the rise of the tyranny of Pisistratus is pretty much along the line presented earlier for the rise of any tyranny; see Section II.1. As far as his administration is concerned, Pisistratus preserved the institutions of nine archons and Areopagus, although he ensured that the key archons supported him. Aristotle offers kind words (Ath. Const. p. 58): "Pisistratus administered the city's affairs moderately more like a citizen than like a tyrant. In general, he was humane, mild and forgiving to wrongdoers, and in particular he lent money to those who were in difficulties, to support their work so that they could continue to maintain themselves by farming. … [He] maintained peace and saw that all was quiet. For that reason it was often said that the tyranny of Pisistratus was the age of Cronus; for afterwards when his sons took over, the regime became much more cruel. … he was willing to administer everything according to the laws, not giving himself any advantage. … He had many supporters both among the notables and among the ordinary people: he won over the notables by his friendly dealings with them, and people by his help for their private concerns." Pisistratus died in 528/7 BC.

The point to note here is that Pisistratus combined his resources and mercenaries with the rising hoplite power to overthrow nobility. And once Pisistratus assumed power, the hoplites became even stronger relative to the nobility. But after Hippias, the elder son of Pisistratus, became tyrant, the younger son Hipparchus was killed in some sort of an affair that need not concern us here, and Hippias became tyrannical/oppressive. Kleisthenes, the leader of the Alkmeonids, and his followers fled Athens. Eventually, Sparta, under King Kleomenes intervened and removed Hippias from power ending tyranny in Athens in 510. Spartans wanted to install an oligarchy in Athens, and opposed tyranny or power in the hands of the people.

II.4 The oligarchy of Isagoras

After the fall of tyranny in 510, the nobility split between Isagoras and Kleisthenes camps. Isagoras was elected archon in 508/7; Kleisthenes lost to Isagoras. Recognizing his losing situation, Kleisthenes made his proposal to the people of Athens. In fear, Isagoras called King Kleomenes who showed up with 700 soldiers. Kleomenes forced Kleisthenes and his followers into exile, but the people rose in revolt. Isagoras was thrown out, and democracy installed. Aristotle writes (Ath. Const., p. 63)

> " [Spartan King Cleomenes] tried to dissolve the council and make Isagoras and three hundred of his friends masters of the city. However, the Council resisted and the common people gathered in force; the supporters of Cleomenes and Isagoras fled to the Acropolis; the people settled down and besieged them for two days, but on the third day made a truce with Cleomenes and all the men with him, and recalled Cleisthenes and other exiles. Thus the people obtained control of affairs, and Cleisthenes became leader and Champion of people."

Why did the people rise in revolt? What did Kleisthenes propose and why? To understand the environment of the time, the strategies and payoffs of Kleisthenes and other players, I seek a model to graphically represent the crucial elements of the Athenian history so as to specify the game Kleisthenes played.

III.   A Model of the Athenian History

Powell (1999) presents a model in which two states bargain, under the threat of war, over territory. The model applies just as well to two factions competing, possibly violently, over governmental power within a state. With two Athenian factions, the people (see definition below) and nobility, battling over governmental power through much of the period under review, it is possible to graphically represent the Athenian history in Powell's two-player model.

Powell's (1999) result is simple, robust and intuitive: at equilibrium, the distribution of benefits (q) must reflect the distribution of military capabilities (p). In my context: the greater the military capability of the people, the greater is the probability (p) that people

would win, and therefore, greater must be people's share (q) of the governmental power. The idea helps represent Athenian History on a p-q graph in a parsimonious way.

The faction called *people* refers to those non-nobles who had the resources and the military gear to challenge the nobility in pursuit of economic and political independence and seek a larger share of the governmental power. Till the time of Athenian revolution (507), by people I mean hoplites, metics and perhaps some thetes. From 507 to the battle of Marathon (490), people would refer to citizen hoplites (metics having already become citizens under Kleisthenic reforms) and some thetes. After the battle of Salamis (480), people would refer to both hoplites and thetes, the latter being the drivers of the Athenian Navy leading to the rise of the Athenian Empire.

III.1 Powell's model

I present key insights of Powell's model, with some modifications to suit Athens.

Distribution of Benefits

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        0                                                   1
People  |_____|_____| Nobility
            q
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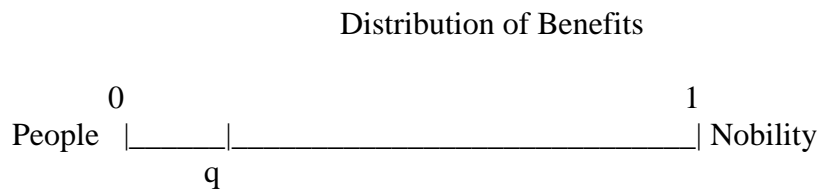
At q, people's share of the power = q, nobility's share = 1- q.
Figure 1

Two competing factions, the people and nobility, bargain to share government power under the threat of civil war. The minimum power people can have is set at zero, and the maximum power is set at 1. All power is shared. At any point q, the peoples' share of the governmental power is $q – 0 = q$, and the nobility's share is 1-q. Clearly, *q represents the distribution of benefits between factions*. The farther away q is from a faction's minimum power, the more power that faction has: a q more to the right (farther away from 0) means more power to the people. Thus, 1 represents all power to the people, and 0 all power to the nobility.

Let p *be the probability that the people win against the nobility in the event of a war*. Thus, p reflects the distribution of military capability between factions: p close to 1 (resp. 0) implies near-certain victory (resp. defeat) of the people, and $p = \frac{1}{2}$ implies even matching of forces. Assume that p is determined by exogenous factors. The assumption appears reasonable given my focus on periods of rapid change in p arising from unpredictable events.

The people and nobility, represented by their leaders, bargain under the threat of a war. Say, the nobility is in power (the Chief is from the nobility) and proposes x. The people either accept x or attack the nobility; allowing for a counterproposal by the people in this

model would make no difference.[5] If people attack, their net expected benefit = $[p. 1 + (1-p) .0 - c_p]/(1-\delta_p) = (p - c_p)/(1-\delta_p)$, where 1 (resp. 0) is people's per period benefit if they win (resp. lose), c_p is the (incremental) cost of war expressed in terms of per period cost, and δ_p is the discount rate. It is assumed that after the war, the victor gets all the power forever. If people accept x, their discounted benefit = $x/(1-\delta_p)$ under the assumption of risk neutrality. Hence, when the nobility proposes x, the people would attack if and only if net per-period benefit of war = $p - c_p > x$ = per period benefit of accepting nobility's proposal.

The nobility's net expected payoff from war = $[(1-p).1 + p.0 - c_n]/(1-\delta_n) = (1-p- c_n)/(1-\delta_n)$, where c_n is the cost of war to the nobility and δ_n is its discount rate. Nobility's benefit of a proposal x, if it prevails, is $(1-x)/(1-\delta_n)$. Hence, the nobility's proposal must be such that nobility's per period benefit from x = $1 - x > 1 - p - c_n$ = per period net benefit from war, that is, no war if and only if $x < p + c_n$.

Suppose the status quo division of power is q. If $q < p - c_p$, then the nobility would propose and the people would accept $x^* = p - c_p$; anything less to the people would lead to war; see Figure 2. If $q \ \varepsilon \ [p - c_p, p + c_n]$, then neither party would go to war although both parties would seek to obtain the maximum share of the governmental power through political but peaceful machinations. If $q > p + c_n$, it would be unacceptable to the nobility: under the threat of war, the nobility would do no worse than $p + c_n$.

Let us define the region of peace $Q \equiv [p - c_p, p + c_n]$. From the preceding analysis, if the status quo q lies in Q, then there would be no war. If q lies outside Q, then one of the two parties would concede and a proposal x in Q would obtain. Which exact point x would obtain is undetermined based on the assumptions we have made so far. Arguably, the actual value of x will be determined by the ability of the competing factions to outwit each other under peace-time rules.
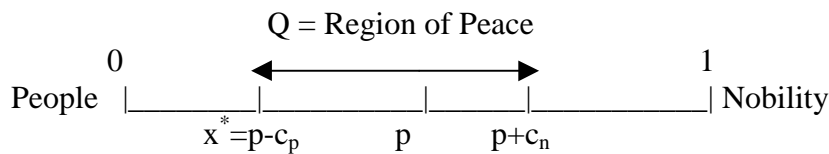
Q = Region of Peace

Figure 2

Note that the higher the probability that people win or the lower the peoples' *incremental* cost of engaging in a war, the higher must be their minimum acceptable share of domestic power (x^*). In particular, the more organized are the people or greater is their investment

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[5] If people were allowed to make a counterproposal, it would not succeed. This is because the nobility would not concede more power than x given the knowledge that at x (offered last period), people chose to wait rather than go to war.

in armor and military training, the higher must be x^*. Further, factors that raise p (e.g., the arrival of a political entrepreneur) or lower c_p, would raise peoples' minimum acceptable share of domestic power (x^*).

Continuing to assume complete information, let us allow p to vary as in Powell (1999). If p changes gradually, then the incumbent party would make a series of concessions over time as in Powell. But if p changes rapidly, then war may follow. The argument is Powell's and runs as follows:

Suppose exogenous factors cause p to increase from p_1 to p_2, such that $p_2 - c_p > p_1 + c_n$. That is, people's minimum demand at p_2 (= $p_2 - c_p$) exceeds nobility's maximum willingness to yield at p_1 (= $p_1 + c_n$); Figure 2b. If the nobility can predict such a change in p, then it would go to a pre-emptive war at p_1 (for a gain of $1 - (p_1 + c_n)$ per period) rather than wait for the people to become stronger and yield $p_2 - c_p$ for a lesser gain of ($1 - (p_2 - c_p)$). In other words for a rapid but predictable change, the incumbent party would prefer to go to war before the challenger becomes stronger unless the challenger can *credibly commit* to an intermediate level (such as q; Figure 2b) at which both parties are better off relative to war that gives the nobility $p_1 + c_n$ and the people $p_1 - c_p$.
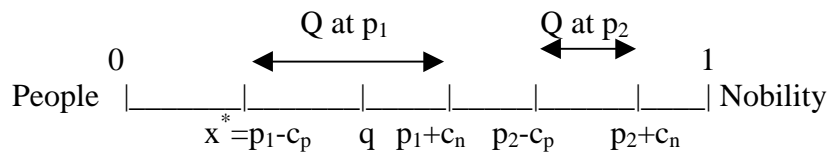

Figure 2b

This completes the description of Powell's model. Before I turn to the history of Athens, let me do two things. First recount the main points of Powell, and second, present a two-dimensional version of Powell's model, with q on the x-axis and p on the y-axis, which would facilitate a graphical representation of the history of Athens.

Powell's main points are: (a) In a game of complete information, there would be no war if p, the probability that people win, changes gradually: both parties would arrive at a peaceful settlement in the region of peace Q. (b) If p increases rapidly such that people's minimum demand at p_2 exceeds nobility's maximum willingness to yield at p_1, then there could be war unless the people can credibly commit to a level that makes both parties better off given the cost of war.

The two-dimensional representation of Powell's model appears in Figure 3. The horizontal axis represents the distribution of benefits q, and the vertical axes distribution of power. The left-hand vertical axis plots $p - c_p$ (= people's per period net benefit from war) whereas the right-hand vertical axis plots $p + c_n$ (nobility's per period net benefit from war). Recall, c_p and c_n are fixed and p is exogenously determined. To illustrate, suppose q = .4, that is, the level of benefits accruing to the people = .4 and the benefits accruing to the nobility = 1 - .4 = .6. If $p-c_p > .4$, then the people would go to war unless

the Nobility relents. Thus, if the $(q, (p – c_p))$ coordinates fall in the rectangle ABCD (excluding the boundary AB), the people would go to war because in this rectangle $p – c_p > q$. What about the nobility? When $q = .4$, $1 – q = .6$. The nobility would go to war if $1 – q < 1 – (p + c_n)$, that is, if $q > p + c_n$. Thus, the nobility would go to war if $(q, p + c_n)$ coordinates fall in the region EFGH excluding the boundary GH.

Note that the war depends on both p and q. Even if each faction's benefits = 50% ($q = .5$), there would be war if $p – c_p > .5$ or $.5 > p + c_n$. Benefits must correspond to a faction's power, a point Powell has emphasized when comparing his model to other ideas of international relations such as the "balance of power" and "preponderance of power" ideas.

At a point like Y($q = .6$, $p-c_p = .5$) there would be no war. But if the power of the people *suddenly* jumps to .8 with benefits remaining at .6 (point Y'), then there could be war. Likewise, if the power of the people suddenly drops to .2 with benefits remaining at .6 (point Y"), there could be war initiated by the nobility.

III. 2 A Graphical Representation of the History of Athens

The purpose of the graphical representation is to determine the strategies available to Kleisthenes and other players and their payoffs. It would help understand why the Athenian nobility supported Kleisthenes when an oligarchy was already in power. That is, why would the nobility support a proposal worse than the status quo?   There is a second purpose: to explain the gyrations of the Athenian democracy from the time of Perikles to the end of the fifth century when the democracy once again stabilized. This is done in Section VI.

Figure 4 presents the distribution of benefits (x-axis) and power (y-axis) in Athens over 200 years with specific placement of the state of affairs at the time of Kylon, Solon, Pisistratus, Spartan invasion and Isagoras. The situation in the eighth century Athens is shown by point "a" (near the origin), Figure 4. The people had little benefits and little power, but no war. The hoplite movement of the seventh century (Fine 1983) meant more power to the people and possibly more benefits trickling to the people through much of Greece.

Before moving to Kylon, I should emphasize the point corresponding to Kylon, see Figure 4, could be anywhere in the neighborhood of where it is shown subject to a few commonsense restrictions. The aim of the exercise is to distill the drivers of Athenian politics with a view to understand Kleisthenes.

The point marked Kylon in Figure 4 represents the following idea. Say, benefits q accruing to the people are 0.2; numbers lower than 0.2, or somewhat higher than 0.2 would do just as well. At $q = 0.2$, the region of war is shown by the rectangle k1,k2,k3,Y (call it the Kylon rectangle). That is, if the power of the hoplites were to rise to any point in the Kylon rectangle, then the benefits of 0.2 would be incompatible with peace. Either the nobility must share more benefits with the people or face war. Now if the rise in the

hoplite power were gradual, then as Powell has shown, there would be a gradual adjustment in the benefit share. But if the rise in the power is sudden, then there could be war.

When Kylon attacked the Athenian nobility knew that given time Kylon and Athenian hoplites would become considerably more powerful and difficult to beat. They had to be stopped right there (that is, the probability Kylon and hoplites win will suddenly rise to p2 tomorrow which is considerably greater than p1 today). Violence followed (it is consistent with Powell's model) and Kylon lost. It is for this reason that the point marked Kylon is shown inside the Kylon rectangle.

Once Kylon lost, the situation goes to Drakon at which the prevailing hoplite power is not enough to engage in a war (point Drakon is not shown).   The benefits people received under Drakon's written laws are an illustration of gradual and peaceful change. After Drakon is Solon (594). Solon's situation is at the edge of a war as the ancient texts show and hence Solon is shown inside the rectangle s1,s2,s3,Y in which wars occur.

As indicated in the previous section, Solon's reforms were a failure. Being considered one of the Seven Wise Men, he seems to have miscalculated. But there was no war soon after Solon indicating that hoplites were not strong enough. But then Pisistratus brought his mercenaries suddenly boosting the probability that people would win. Pisistratus succeeded in installing his tyranny.   The point Pisistratus is shown in the rectangle p1,p2,p3,Y.   During the regime of Pisistratus two things happen: the power of Pisistratus and his supporters grows and their benefits grow. This is shown by the point marked Hippias(1) at the top. When Hippias becomes oppressive, the Nobility seeks Spartan help. But Spartan help means sudden drop in the probability that people would win. But the benefits of Hippias and his supporters are still very high, no longer in keeping with their diminished power. See the point marked Hippias (2) in the rectangle at the bottom right. War follows. After Hippias was removed, Isagoras became archon.

So long as the Spartans support Isagoras, Isagoras would wield power (with low probability of Hoplites winning the war) and peace would prevail. Indeed, the supporters of Isagoras thought that given the changed power situation, the hoplites and metics were getting too much benefits. The purge began: citizens' lists were reopened and people were disqualified.

IV.   Kleisthenes's Game

Kleisthenes knew that any serious alternative to Sparta-supported oligarchy of Isagoras would probably invite Spartan attack. It was Sparta that forcibly removed tyrant Hippias from power in 510 to install oligarchy in Athens. Worse, the Spartans would form a military coalition that would be difficult to beat. A *necessary* condition to meet the Spartan challenge is Athenian unity: the people and nobility must make a common cause against the Spartan coalition. Therefore, Kleisthenes had to ensure that the nobility has no incentive to join the Spartans to defeat his plan even though his plan would give more power to the people than the people currently had under Isagoras! Without the nobility, its cavalry and experienced military leadership, there was little hope of defeating Sparta or maintaining long-term peace. Clearly, *the nobility must have an important say, on a permanent basis, in the affairs of Kleisthenic Athens* and must consider itself better off than it could be under the regime of Isagoras.

Kleisthenes also knew that Athenian unity would perhaps not be *sufficient* to defeat a Spartan coalition. Foreign help, possibly that of Persia, would be necessary. But a delegation to Persia must wait until after Kleisthenes assumed power. Yet, enough people and nobles of Athens must believe that they would be better off supporting Kleisthenes even against a formidable Sparta and even if Persia refused to help Athens. What proposal could Kleisthenes make to induce such beliefs? Moreover, the beliefs had to be sufficiently intense for the people to overthrow Isagoras and his allies, and fight for the Athenian independence against Sparta. Promise of a great payoff was necessary, but an empty promise would not do: a credible commitment was necessary (North and Weingast, 1989). Indeed, even a credible commitment would be insufficient!

IV.1 The key players in the game are:

1. Kleisthenes and his supporters (said to be 700 families; assuming 1.5 adult male citizens per family, that would be 1000 males out of about 30,000 Athenian male citizens).
2. The People: Hoplites + metics + some thetes.
3. The nobility.
4. Sparta.
5. Corinth (as a member of the Spartan coalition).

Players move in the order listed above. Consider Kleisthenes's strategies. He could play "Tyrant" by aligning himself with the people who supported Pisistratus. He could play "Oligarchy" by taking a position a bit closer to the people than Isagoras. Or he could play something between "Tyrant" and "Oligarchy": call it "Democracy," a strategy with undefined features. Let me consider each of these broad strategies ignoring the various shades of each.

Kleisthenes must know that his proposal (strategy) must obtain the support of the people against Isagoras. Locating too close to Isagoras would attract neither the people nor the nobility: the people would see Kleisthenes as out of sync with their military power, and

the nobility would consider Kleisthenes too risky for marginal gain; the nobility already had Isagoras and there was no reason to assume that Sparta would support Kleisthenes against Isagoras. Therefore, playing Oligarchy is not viable: it is unlikely to succeed against Isagoras, and even if it did, Athens would be subservient to Sparta. Most importantly, oligarchy is unlikely to last against people's military capability.

Kleisthenes must also know that his proposal must obtain the support of the nobility. If it did not, then there are two possibilities. The proposal fails (a bad outcome) or it succeeds. If it succeeds, then Sparta would attack supported by many of the Athenian nobility, leading to the defeat of the people of Athens (a really bad outcome). It follows that playing "Tyrant" is not a viable strategy. The assumption here is that to succeed against Sparta Athenian people and nobility must be united.

Precluding tyranny or oligarchy does not imply that playing democracy, a centrist proposal, would succeed; Athens may well be doomed to swing from one system of government to another. There are three main problems with playing democracy:

1. Why should the nobility support democracy when the preferred form of government of many nobles, oligarchy, is the status quo?

2. Even if nobility has reasons to support democracy, why should the nobility believe that Kleisthenes would carry out his promise of a democracy instead of becoming a tyrant; this is the problem of credible commitment.

3. Even if the nobility has reasons to support democracy, and even if Kleisthenes is able to make a credible commitment, where is the guarantee that democracy would have a better chance of forestalling foreign aggression or domestic uprising than any other form of government? This is the problem of *reproducibility*. Clearly, if democracy cannot last (reproduce itself) against a Spartan coalition seeking to install oligarchies everywhere, then what is the point of a democracy for a period or two? Likewise, it should be clear enough that had there been no hoplite movement, Isagoras's oligarchy would be stable; democracy would not have had a chance to survive due to the military imbalance between the nobility and the people.

Note that reproducibility implies credible commitment but not the converse. Reproducibility was not an issue in North and Weingast (1989). Perhaps England, being an island, could afford to ignore, at least temporarily, the problem of reproducibility; credible commitment was sufficient. Alternatively, reproducibility was an issue for England but North and Weingast chose to focus on the problem of credible commitment. Whatever may the case, reproducibility is of utmost importance to Athens with Sparta so close that a top-notch runner could run to it non-stop.

Let me now turn to the three problems associated with playing democracy listed above. To address the first problem, *assume for a moment* that Kleisthenes's democracy is reproducible. Why would the nobility support any position away from Isagoras? The answer appears to be the following. The nobility knows the history of Athens presented

in the preceding section.   It knows that Solon had failed, and that Pisistratus had ruled for nearly three decades on the basis of the hoplite power. The nobility thus knows that it would be very difficult to control an organized group of fighters, who had overthrown nobility from power over fifty years ago, and who became richer, bolder and more seasoned over time. Thus, it knows that Isagoras represents an untenable position considering the military power of the Athenian people. Isagoras is feasible only as long as Sparta's military is stationed in Athens. When Sparta leaves perhaps to attend to other battlefronts, the power balance in Athens will return to Hippias (1) from Hippias (2) in a jiffy; Figure 4. Nobility's insistence on oligarchy could lead to the rise of a tyrant with the accompanying loss to the nobility in terms of property, death, and political instability (see Fine, 1983, p. 131).

What sort of a democracy should Kleisthenes adopt from a continuum of centrist proposals with thousands of details? Clearly, the proposal must (a) foreclose the option of switching to an extreme government later, not only by Kleisthenes but his successors, at least as far into the future as it was possible to see; and (b) enable Athens to survive against other systems of government. Kleisthenes must find a system of government that would reproduce itself in the wake of all the domestic pressures and foreign aggression.

On the question of reproducibility, could Athens with its factions united by Kleisthenes's proposal survive an attack by Sparta? Probably yes. Could Athens survive an attack by a Spartan coalition? Probably no.   Then how could Kleisthenes convince the Athenian people and nobility to support his proposal given that Sparta would seek to form a coalition and, if successful in forming it, would attack Athens and install a harsher oligarchy? Let us consider the people first. If Kleisthenes offered substantial benefits to the people measured in terms of expected value, then it might be rational for the people to support Kleisthenes. With Isagoras stripping people of their citizenship, offering citizenship to the metics would be a good idea from the point of view of trade, competitiveness, and most importantly, defense; recall, in ancient Greece defense depended on two things, viz., the number of soldiers and training. But what could Kleisthenes offer the hoplites and the nobility? I think a part of the answer lies in the following: (a) Kleisthenes would proceed to build a coalition with Persia to neutralize the Spartan coalition, and (b) it would not be rational for the potential members of the coalition to attack Athens.

To summarize, Kleisthenes must obtain the support of both the people and nobility; otherwise his proposal would fail. Indeed, Kleisthenes must make a centrist proposal that fulfills the condition of reproducibility, and thereby, credible commitment. If he can, the people and nobility would support it knowing that formation of the Spartan coalition would be irrational for some of the players. Sparta may attempt to form a coalition but the coalition would fail probably because it is too costly for some members who are concerned that coalition's victory would make Sparta a dominant polis in the region.

I present the above story as a dynamic game of complete information. Figure *. I add Corinth as a player who moves after Sparta although it should be a bunch of polis that joined the Spartan coalition.

Each player has two strategies. Kleisthenes could choose a proposal that reproduces itself or one that does not. The people, followed by the nobility, can either support or oppose it. Sparta may seek to form a coalition to attack Athens or it may not. Corinth may join Sparta or it may not.

The payoffs (not shown) have to fulfill the following requirements. It is profitable for Corinth to not join the Spartan coalition. Sparta does not find it profitable to attack Athens by itself. Both people and nobility support Kleisthenes's proposal. Kleisthenes makes a proposal that leads to a system of government that is reproducible. Writing the game in the way specified makes it simple and transparent although more complex versions, including moves by nature, are possible. The Solution to the game is: Kleisthenes makes a centrist proposal that leads to a reproducible system of government, the people support it, the nobility supports it, Sparta is indifferent between forming a coalition or not (assume forming a coalition is costless), Corinth rejects the invitation to join the Spartan coalition. If either of the Athenian faction opposes Kleisthenes's proposal, the game ends with payoffs such that it is not worthwhile for players to follow that route.

As it turned out, the Corinthians withdrew from the battlefront after a big speech! In reality, they felt that the invasion of Athens was not in their interest! Seeing this, the two kings of Sparta split and Kleomenes was left alone to fight while the other king took his forces back to Sparta, Kleomenes also withdrew. The Athenian beat the remaining members of the coalition thus establishing democracy.

What proposal should Kleisthenes make?

V. Kleisthenes's Proposal (This section is incomplete; it is being revised)

Kleisthenes's reforms had two components: tribal reforms and the Athenian Constitution.

V.I The Tribal reforms

Cleisthenes left the existing system of phratries alone. Instead, he installed a parallel system of which the basic building bloc was a deme. The key elements of his reforms were as follows. First, he partitioned Attica into three regions: Athens and its adjoining ports, the rest of the coastal area, and the hinterland. Second, he partitioned each region into ten trittyes; thirty trittyes in all. Third, he partitioned each trittys into demes: a deme consisted of 100 to 1200 adult male citizens spread over one or more villages or towns. Athens was partitioned into several demes, Attica into 139 demes. Finally, he assigned the thirty trittyes to ten tribes such that each tribe contained a trittys from each of the three regions. Thus, unlike the pre-reform tribes which, by virtue of their evolution, were concentrated in a region, the post-reform tribes represented interests of each of the three regions. The tribes were heterogeneous within but "homogeneous" across. These were political tribes of roughly equal size.

Now what enabled Cleisthenes to implement his reforms? Kleisthenes left the phratries alone by letting them discharge their social, economic and religious functions, but he took their political power away. He required that to be a citizen, it was necessary to belong to a deme; a man who did not belong to a deme could not vote/had no rights. A deme was a purely political entity. There must have been opposition to the idea of a deme, but it was definitely not as great as it would have been if Kleisthenes tried to abolish phratries. It was through the system of demes that Kleisthenes granted citizenship to the metics substantially increasing the number of voters by some estimates. Kleisthenes also garnered support of Athenians who might marry a non-Athenian because their off-springs would be citizens.

The extension of citizenship rights was not only a political but also an economic subject. It attracted people to Athens who would contribute to the Athenian economy. Moreover, the tribal system promoted unity as leaders of each tribe, in order to preserve their leadership positions, would have to serve the interests of their constituents from each region. The defense implications of tribal reforms were enormous in terms of training, unity, mobilization, speed, battle readiness and effectiveness. It is a subject on which Adam Smith dwelt at length (as I will show in the next draft). The point of Adam Smith is that mercenary forces are best organized in groups that are cohesive and have the same leader during war as they do during peacetime. Kleisthenes's tribes meet Adam Smith's requirements.

A point to note is that the tribal reform was a one-time structural change that did not require constant monitoring. By making citizenship contingent on the place of residence (deme) rather than membership of a clan, Kleisthenes avoided serious problems of moral hazard, non-compliance and religion. It was perhaps the first case of the separation of religion and state. And there was nothing the phratries could do to bloc the political

reorganization of Athens because the success of Kleisthenes's proposal (by way of the Athenian revolution) meant that the entire package was approved. It was an up or down "vote" on the whole program. Once approved in this manner, the implementation was automatic given the hoplite power that existed throughout Attica. There was little that the nobility could do to bloc the reforms. Note also that unlike Solon, who got involved in writing laws and policies, Kleisthenes engaged in procedural reforms: Kleisthenes changed the rules and let things fall where they would.

V.2 (Incomplete)

Constitution of Athens: The Council of 500 + The Areopagus + The Assembly + The people's court + Ostracism + The strategoi (one general elected from each tribe)

The Council of 500

Each tribe sent 50 deputies to the Council of 500. The deputies were elected by the demes, with the size of the deme determining the number of its deputies. With 500 deputies representing about 30,000 citizens at the end of the sixth century, there was one deputy per 60 citizens. Moreover, with deputies elected for a year and no citizen permitted to be a deputy again, a large number of citizens learned how the political system worked having served as deputies at some point.

The rules of the Council of the 500, with 50 members drawn from each tribe, ensured that people of Attica made decisions, not just the Athenians for whom attending the meetings of the Assembly was the easiest on account of the distance. A critical rule required each tribe to be the agenda setter for a tenth of the year. It had two important implications. First, with all 50 members of a given tribe present during its tenth of the year, outlying areas were perennially represented.   Second, each tribe ruled moderately lest it be tomorrow's victim of those it victimized today.

The Council acted as the committee of the Assembly: the Assembly could discuss or vote on the proposals approved by the Council.

Ostracism is like term-limit on the U.S. President, more or less. It is more because it expels the person out of Athens, and less because the person can run for office after 10 years. Ostracism required a vote of the Assembly with a quorum of 6000, the person receiving the maximum number of votes, would have to live away from Attica for ten years while preserving the right over his property during this period.

Strategoi

Each tribe elected a strategos and fought as a military unit under his leadership. Over time, archonship became less powerful and began to be chosen by lot from a list of elected candidates; strategoi became the centers of Athenian political power and were directly elected. (Aristotle, Ath. Pol. 22.5, 26.2).

VI. Areopagus and Gyrations of the Athenian Democracy

The Council of Areopagus consisted entirely of former archons. Its membership hovered around 150 (Hansen's 1991) taking into account nine new archons joining every year. In the sixth century it was the most influential institution in Athens. It "had the oversight of the laws, the magistrates, the politically active citizens, and the general conduct of all Athenians, and it could pronounce judgments, not excluding the death sentence, in political trials (Hansen, 1991, 37)." Kleisthenes incorporated Areopagus in his constitution *as is* although it had to share power with the Council of 500, the Assembly and from 487/6 the ten strategoi (generals) elected from ten tribes. If Cleisthenes did not inherit the Council of Areopagus, he would probably have to invent it in exchange for nobility's support of his proposal. Areopagus enabled Cleisthenes to make a credible commitment that nobility would have an important and permanent say in the affairs of Athens.

The key development that seriously affected Areopagus was the rise of Athens as a naval power which led to the defeat of the Persians at the naval battle of Salamis in 480, the creation of the Delian League in 478 under the leadership of Athens, and with all of these the rise of the more numerous *thetes* as a political force. The internal balance of power changed: while the land forces of cavalry and hoplites were recruited from the rich and middle classes, respectively, the navy was manned by the thetes. Thus, the radical democracy came into being. Aristotle writes:

"The Council of the Areopagus at Athens, for example, gained in reputation during the Persian war; and the result appeared for a time to be a tightening of the constitution [i.e., a movement in the direction of oligarchy.] Then the tide turned: the common people, who served in the navy, were responsible for the victory of Salamis, and secured for Athens an empire which depended on naval power; and the effect of this was to strengthen the cause of democracy." Aristotle, Politics, V 1304a, Ed. Barker, 1978).

During the days of radical democracy, Ephialtes and his associates including Perikles wanted to abolish Areopagus.   In 462, they succeeded in reducing "the Areopagus to the single function of being the court of homicide (Hansen, 37)." The timing is interesting: Ephilates-Perikles acted when the principal leader of the nobility, Kimon was away on a mission with 4000 hoplites, and the "poor citizens were in majority in the Assembly (Hansen, p.37)." The Kleisthenic balance was seriously undermined by the temporary imbalance of factional power. The nobility lost but waited for its opportunity. Ephialtes was murdered. Perikles succeeded in ostracizing Kimon when the latter returned to Athens from his mission forestalling any attempt to restore Areopagus.

Perikles became the undisputed leader but his pursuit of the Peloponnesian war ended disastrously for Athens in 404. With the help of Sparta, democracy was abolished and oligarchy installed under the rule of the "Thirty Tyrants." Kritias, Plato's mother's uncle, led the extremist wing of oligarchs. The Thirty Tyrants executed more than 1500 citizens (about 5% of the population of about 30,000 male citizens), and reduced the citizen population to about 3000 after disenfranchising or expelling many others (Hansen, p.42);

this indeed is the background to the trial of Socrates. Hansen (p. 42) writes: "many democrats had fled; and it was they who gathered and organized the resistance. Early in 403 they entered the Piraeus … and in a pitched battle … the oligarchs were defeated and Kritias fell." King Pausanias of Sparta agreed to democracy in Athens provided the oligarchs could create their own polis in Eleusis. The democrats agreed with Pausanias and democracy was restored in Athens in 403. Two years later the Athenians captured Eleusis and the truce that followed was respected. What about the Areopagus?

The Thirty Tyrants annulled the laws of Ephialtes dealing with Areopagus and restored its full powers. When democracy was restored in 403, the powers of Areopagus were cut but no where to the extent of Ephialtes. Hansen (p. 290) states: "After the debacle of the Peloponnesian War even democrats saw eye-to-eye with the Thirty that the Areopagus ought to have some degree of supervision over the laws, the magistrates, and the conduct of the citizenry as a whole; and from 403 onward, throughout the fourth century, we can see its powers expanding all the time." Hansen (p. 290) adds: "In 403/2 in connection with the whole corpus of laws, Assembly agreed that the Areopagus was to supervise the administration of laws by the magistrates." Later the Assembly passed a decree, on the motion of Demosthenes, that the "Areopagus should have the right to judge any citizen for any offence (Hansen, p. 291)." Hansen adds, "Sentence [of the Arepagus] was final and did not have to be laid before the Assembly or the People's Court; and the condemned person was handed over directly to executioner straightaway." Ironically, Demosthenes was tried and convicted by Areopagus.

The inferences I wish to draw from the above description are the following:

(a) "Radical democracy" is rooted in the rise of the thetes as a political force. It enabled Ephialtes and Perikles to reduce Areopagus to nothing at a time when Kimon was away. The reduction of Areopagus went far beyond the nobility's military capabilities and contributions to Athens as the subsequent events show.

(b) The defeat at the Peloponnesian war, led by Perikles, opened the possibility or led to the conviction that the disaster could have been avoided if there existed an agency of equal or greater authority and permanence than Perikles.

(c) The preservation of Areopagus and its powers from 403/2 onwards by the democrats implies that a long and bitter experience had enabled the Athenians to learn the virtues of Kleisthenes's centrist constitution.

(d) The stability of democracy was closely linked to Kleisthenic balance of factional powers by the Athenian constitution.

To be done: Represent the decline and rise of Areopagus on the p-q graph.

VII. Conclusion

J. Bronowski (1976) says about Einstein: "In a lifetime Einstein joined light to time, and time to space; energy to matter, matter to space, and space to gravitation."

Imitating Bronowski, I would say:
In a lifetime, Kleisthenes joined democracy (rule of many) to freedom, democracy to participation (by enabling citizens to participate directly and indirectly through their representatives), and democracy to equality (as each *citizen's* vote counted the same). Kleisthenes used democratic constitution to lead factions to internal peace (through the mechanism of power sharing), and peace to prosperity and trade (on the basis of freedom to pursue private ends), and prosperity to common defense. Finally, Kleisthenes linked democratic process to preferences and justice, and thereby to policies.

Promise was not enough, Kleisthenes had to demonstrate that his centrist policy (democracy as opposed to oligarchy or tyranny) would work, not just for a year but for many years into the future, well after he was gone. He had to devise a mixture of institutions that would limit future leaders of Athens from taking extreme positions. He had to know the meaning and role of institutions, incentives, self-enforcement, checks and balances, and credible commitment. He had to feel confident that democracy would survive pressures from various groups who would attempt to redefine it. It is in this sense that the Athenian constitution is a deep intellectual masterpiece. It is made of the stuff that informs modern thinking. And I have not even mentioned that Kleisthenes had to do all things in a short window of time (a year or two) that the accidents of history would present to him.
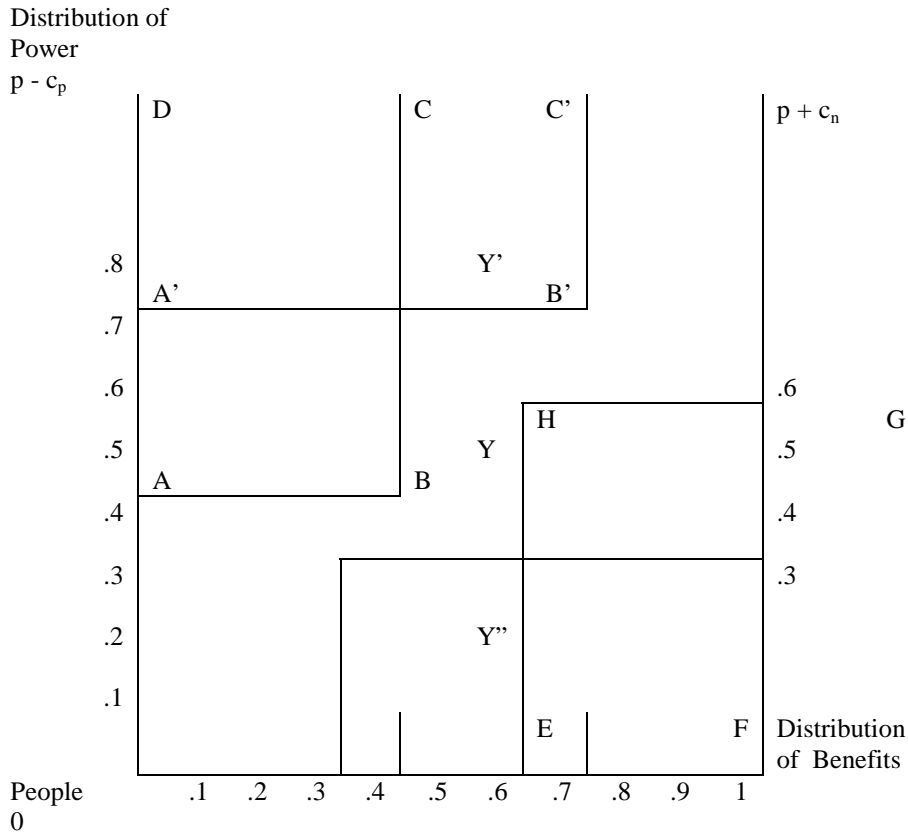
Many historians have claimed without proof that Kleisthenes advanced his proposal in pursuit of self-interest. A bit of reflection would reveal the difficulty of proving such a claim. To prove, it must be shown that the net expected benefit to Kleisthenes *before* he floated the proposal = probability Kleisthenes succeeds * benefit from success + probability Kleisthenes fails * cost of failure is positive. If the cost of failure is high, then it is not clear that Kleisthenes faced positive net expected benefit. It is quite possible and may even be likely that Kleisthenes and his family would be exiled or executed by King Kleomenes if only Kleomenes had won either when he came to help Isagoras or when he assembled a coalition to invade Athens to uproot democracy. If sufficiently high value is attached to exile or death, then net expected benefit would be negative meaning that self-interest theory needs serious review. It is quite possible that Kleisthenes proceeded with his proposal taking into his own potential costs and benefits, benefits to Athens and the benefits of the opportunity to install his amazing conception: a constitutional democracy and tribal reforms.

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A two-dimensional representation of Powell's model

Distribution of
Power
$p - c_p$

D			C		C'				
									$p + c_n$

.8   Y'
A'   B'
.7

.6   .6
                              H   G
.5   Y   .5
A   B
.4   .4

.3   .3

.2   Y"

.1
                              E   F   Distribution
                                                  of Benefits
People   .1   .2   .3   .4   .5   .6   .7   .8   .9   1
0

No war at Y (.6, .5). But the people may initiate war at Y' and nobility may initiate war at Y" if Y rapidly
moves to Y' or Y".
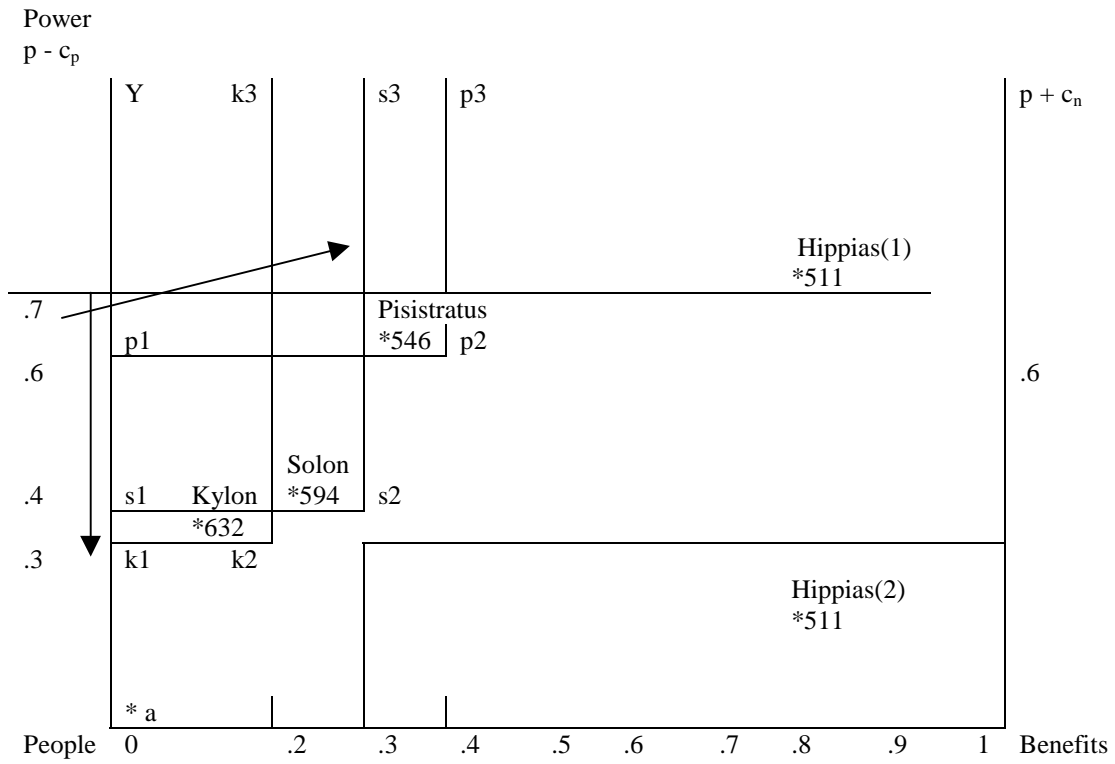
Figure 3

A bird's eye view of major changes in Athens

Power
$p - c_p$

| Y | k3 | | s3 | p3 | | | | | | | | $p + c_n$ |

Hippias(1)
*511

.7

p1

Pisistratus
*546 p2

.6   .6

Solon
*594

.4   s1   Kylon   s2

*632

.3   k1   k2

Hippias(2)
*511

* a

People   0   .2   .3   .4   .5   .6   .7   .8   .9   1   Benefits

Figure 4

Kleisthenes's Game

Oppose   Kleisthenes
loses

Nobility Oppose   *People* Support   *Nobility*   No
Coalition

Sparta ⎯⎯

A reproducible
proposal   Support

Coalition

Kleisthenes

Corinth   Join Sparta K loses

An
irreproducible   Don't
proposal   Join

Nobility   *Nobility*

Oppose   *People* Support   Kleisthenes wins

Figure *