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GEOGRAPHY AND HUMAN DEVELOPMENT: A STUDY OF ANCIENT ATHENS

BY

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DECLARATION

I hereby declare that this work, *Geography and Human Development: A Study of Ancient Athens*, is the result of my own research undertaken under supervision except for references made to other people's work, which has been duly referenced and acknowledged. Also, this work has neither in part nor in whole been presented for another degree elsewhere. I thereby bear sole and full responsibility for any shortcomings of this research work.

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We hereby certify that this was supervised in accordance with the procedures laid down by the University of Ghana.

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ABSTRACT

Two main, often conflicting, approaches or theories have been provided to understand or explain human-geography relationships, namely, *geographic determinism* and *geographic possibilism*. Scholars who hold geographic deterministic views argue that geographic conditions, to a larger extent, determine human culture and development. On the other hand, the possibilists argue that humans have the capacity to arise above the dictates of the geographical environment to modify and adapt to geographic conditions for their development.

Contextually, the Balkan peninsular, since classical antiquity, has been considered by scholars as a major determinant of Greek, admirable human achievements and development. Thus, scholarship on the relationships between geography and human development in ancient Greece is mostly done in geographic *determinism*, leaving less to be said about *possibilism.* In this thesis, I attempt to offer a substantive account of a possibilist understanding of the relationship between geography and human development in ancient Greece in general and ancient Athens in particular.

Incidentally, while pointing out the strength and limitations of each theoretical framework, the result of the study advocates for a merger of both *determinism* and *possibilism* in teasing out the relationships or correlations that exist between human development, geographic environment and civilisation, in the context of Greek society and Athens in particular.

DEDICATION

To

Daniel Djabaku Ocansey(Snr), my beloved father, who imbibed in me the love for nature since infancy;

Agness Ocansey, my sweet mother, who tirelessly fought against the economic hurdles of this world to see her son attain the greatest gift of all education;

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Finally, to one Edna Ottopa-Kisiedu, who in the most trying times of this world, remained on my side, smiling, laughing and sometimes even crying with me.

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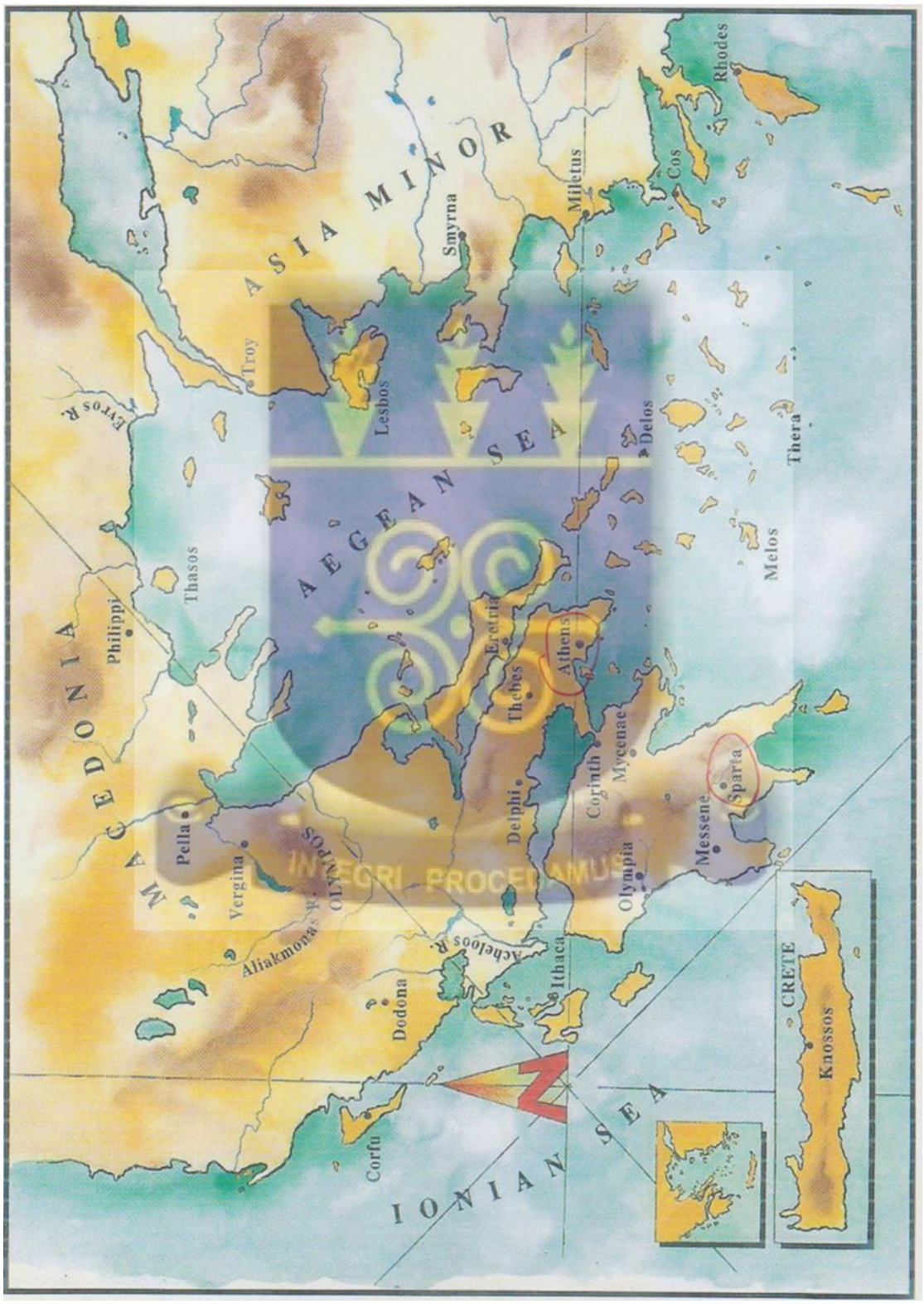
TABLE OF CONTENTS

MAP OF THE ANCIENT GREEK WORLD



CHAPTER ONE

1.1. Introduction

From Aristotle[1] in 4th century BC, down to Andrews[2] in the mid-nineties and Ackah[3] in recent times, scholarly works in general affirm that the issue of interrelationship which exists between geography and human development in relation to ancient Greece is an important discourse which continues to be investigated. Geographic conditions play very important roles in the development of any civilisation. For example, the agricultural advantages of the Indus valley were essential to the development of the Indus valley civilisation.[4] In the ancient Near East, geographic influences on the development of its civilisations are significantly more pronounced. Egypt for example, was bounded by deserts and the sea, and fed by the river Nile, which flooded regularly. Due to this same geographic reason, it was less inclined to intrusion hence, more secured.

However, most of the theories of analysis, approaches and or interpretations, previously applied to this study of the Greek/Athenian human–geography relationships are deficient in interdisciplinary scrutiny, theoretical rigour and consistency, which the study deserves. This, again, is due to the fact that too much focus has been placed on either the descriptive geography (physical environment) of the ancient Greek/Athenian world alone or on the relationship between geography and history of the people.

As implied above, discussions on the relationship between geography and human development began long ago. These discussions can be conceived as ‘‘…an everlasting

[1] Aristotle, *Meteorology*, trans. E. W. Webster (London: Claredon Press, 1923). 26
[2] Anthony Andrews, *Greek Society* (Middlesex: Penguin Books Ltd, 1971). 1
[3] Kofi Ackah, *An Introduction to Ancient Greece with Reflections on Its Import for Developing Societies*, 2nd ed. (Accra: Adwinsa Publications Ltd(GH), 2011). 1
[4] Cristian Violatti, "Indus Valley Civilisation," in *Ancient History Encyclopedia* (2013). 146

fundamental relation which forms the foundation of other relations in society."[5] This relationship is formed through the interaction between human activities and the natural environment. The physical environment can exist without human beings but unfortunately the reverse is untrue. This implies that the relationship between human beings and their physical environment is arguably one that humans are dependent on their physical environment.

The study of the human-geography relationship has witnessed several approaches since the post Darwinian period.[6] Two main approaches have been dominant: *geographic determinism* and *geographic possibilism*. Consequently, scholars have been torn between these two approaches in their quest to understand the human-geography relationships of any given society.

The approach, or school of thought, that supports the influence of geography/physical environment on human action is referred to as *geographic determinism*. According to this theory, history, culture, life-style and developmental stages of a social group, society or nation are exclusively determined and governed by the geographic factors (for example, the landscape, climate and vegetation) of their environment. Generally, the determinists consider humans as passive agents who are influenced by the geographical factors which determine among many others, their attitude and life-style. *Determinism* attempts to explain the physical features and the traits of various societal groups and their cultures with reference to the

[5] Hou Liu, "The Research About the Dynamic Relationship between Human and Geography," *Journal of Sustainable Development* 1, no. 3 (2008). 103

[6] Charles Darwin's *On the Origin of Species* did exclude people in its dialogs of species development. In any case, Darwin's thoughts were soon being connected to human societies and organisations. The term "Darwinian" rapidly gained prominence after 1859 and was used as a part of free approaches to allude to a wide range of records of social development and progress. it is very important to note that, some of these had little in the same manner as Darwin's hypothesis, other than the conviction that natural ideas could be applied to human groups.

influence of their geographic conditions. This line of thought or approach traces its roots to works of some Graeco-Roman scholars like Strabo, Hippocrates, Herodotus and Aristotle.[7]

On the other hand, *geographic possibilism* is an approach commonly linked to the work of Vidal de la Blache, an outstanding pioneer of this approach.[8] He developed this geographical approach as a reaction to *geographic determinism.* Possibilism is the idea that ''the natural environment offers possible avenues for human development."[9] Vidal de la Blache, as stated by Johnson, Gregory and Watts, argued that "the life-styles of people are the product and reflections of a civilisation, representing the integrated result of physical, historical and social influences governing human's relations with their habitat."[10] He also tried to explain the differences between groups in identical or similar environment and pointed out that these differences are not the dictates of physical environment but the outcome of other factors, such as variations in attitudes, values and habits.[11]

Vidal de la Blache is of the view that, it will be illogical to conclude that people are completely free to determine their own directions, but rather, there exists an on-going dialogue between the natural environments and the human communities they support.[12] To him, this results in a "human world full of different *genres de vie* (''lifestyles''), distinctive to particular people living in particular places."[13] Along these lines, possibilism clarifies that the environment does not dictate what people might become, but rather the environment offers the

[7] Cf. Aristotle. *Meteorology*, Herodotus. *History of the Persian Wars*, Hippocrates. *Airs, Waters, Places* and Strabo. *The Geography of Strabo*.
[8] R. Johnston, Gregory D. Pratt, & M. Watts *The Dictionary of Human Geography*, 4th ed. (Cambridge: Blackwell Publishing, 2000). 33
[9] Ibid., 34
[10] Ibid., 35
[11] Ibid., 51
[12] Ibid., 54
[13] P. Cloke, Philo C. & Sadler D., *Approaching Human Geography* (London: Chapman, 1991). 64

opportunities for what they choose to be. People adapt to the different conditions the earth has to offer at different places and that is how different living conditions and habits arise.[14]

The French historian, Lucien Febvre elaborated further on the concept of *geographic possibilism*, by writing that, when it comes to human behaviour and development in relation to their environment, "there are no necessities, but everywhere possibilities; and man, as a master of the possibilities, is the judge of their use.''[15] Thus, according to Febvre, because men exercise great influence on earth, "we should put man in the first place, and no longer the earth, nor the influence of climate, nor the determinant conditions of localities.''[16] Both Vidal de la Blache and Lucien Febvre believe that nature is not mandatory but permissive.[17]

To date, these two dominant approaches to the study of human-geography relationship(s) have remained an irreconcilable paradox.[18] It is no wonder that this paradox has been a debate that has flourished from ancient to modern period for years. Thus, immense debates have been raised by scholars from both divides and many of these are integral to our understanding of the human-geographic issues at hand. Consequently, Relph remarked: ''the landscapes and places we live in are important. Whether we shape them or they shape us, they are the expressions of what we are. Our lives are impoverished precisely to the extent that we ignore them.''[19]

Admittedly, these two approaches have taken center stage in academia over the years. In spite of this, there seems to be no clearly defined disposition on the matter. The fact that this phenomenon continues to be resuscitated by various researchers is a cause worth taking note

[14] George Tatham, *Geography in the Twentieth Century* (New York: The Philosophical Library, 1951). 167
[15] Febvre, in Johnston et al., 2000. 607
[16] Ibid., 609
[17] Alastair Bonnett, *What is Geography?* (London: SAGE Publications Ltd., 2008), 33
[18] Fekadu K. ''The Paradox in Geographic determinism and Possibilism: A Literature Review'' *Journal of Geography and Regional Planning* Vol. 7.7, (2014): 132. doi: 10.5897/JGRP2013.0406.
[19] Relph, E. *The Modern Urban Landscape* (Baltimore: Johns Hopkins University Press, 1987), 37

of. To set the task of a possible end to the periodic reemergence of this human-geography argument, this study will highlight *geographic possibilism* with the aim of understanding the correlations that exist between geography, human development and civilisation.

1.2. Literature Review

This section of the study is a survey of both ancient and modern authors. Its purpose is to discover the views of some scholars and their interpretations of human-geography relationships, especially as they pertain to Athenian human development. The section is also intended to show how more deterministic and less possibilistic these scholars' views have been and then highlight their discrepancies where possible. Even though both *determinism* and *possibilism* are modern terms, ancient authors, most of the time, draw attention to the impact of geography on human development. They likewise emphasize on the importance of geographical knowledge in building outstanding civilisations.

As briefly discussed earlier, the principal argument behind *geographic determinism* is the view that aspects of the physical environment play a pivotal role in the development of peoples' personalities, practices, activities and development. Herodotus for example is of the opinion that tropical climates cause sluggishness and relaxed attitudes, while mild or temperate zones create ethically correct and hardworking individuals, who have the ability to master the abstract and the natural sciences.

The impact of the classical authors is palpable in the works of modern scholars, for instance Ibn Khaldun, a prolific historiographer and philosopher. In his second prefatory discourse of *The Muqaddimah: An Introduction to History*, he characterises seven climatic

zones on the earth, a division obtained basically from the *Geography* of Ptolemy.[20] We know of comparative divisions by Eratosthenes, Polybius and Parmenides from Strabo's second book of *Geography*. After a description of these zones, Khaldun reasons that ''Civilisation is impossible in the area between the sixty fourth and the ninetieth degrees, for no admixture of heat and cold occurs there because of the great time interval between them. Generation (of anything), therefore, does not take place.''[21] Like the Greek authors before him, Ibn Khaldun accepts that the zones assume a vital part in forming human character, to which he dedicated the third and fourth prefatory discussions:

> Now, Negroes live in the hot zone (of the earth). Heat dominates their temperament and formation… In comparison with the spirits of the inhabitants of the fourth zone, theirs are hotter and, consequently, more expanded. As a result, they are more quickly moved to joy and gladness, and they are merrier. Excitability is the direct consequence. In the same way, the inhabitants of coastal regions are somewhat similar to the inhabitants of the south.[22]

1.2.1. Geographic Determinism in Ancient Sources

Chronicled records show that classical researchers on countless occasions alluded to human-geography relationships. Be that as it may, some varied distinctions can be identified but this section will focus on the distinctions between the perspectives of thinkers like Plato and Aristotle and historians like Thucydides and Polybius. Plato and Aristotle are concerned with creating an ideal state, but, as we will see below, they overlook (however, Aristotle gives a few real examples) the realities of the political and social dynamics by placing their city inland without any neighbouring cities. They are of the perspective that their ideal state would not be tainted by the negative and debasing impacts of the physical environment. Thucydides, on the other hand, is concerned with the facts and outcomes of the events. It is significant that

[20] Ibn Khaldun, *The Muqaddimah: An Introduction to History*, trans. Franz Rosenthal (Princeton: Princeton University Press, 1989), 50
[21] Ibn Khaldun, op. cit., 53
[22] Ibid., 63

in the *Laws* or the *Republic*, Plato seldom alludes to the political and social issues of his day, and although he accentuates the role of geography in the creation of the ideal state, he does not reach a conclusion, as he neglects to bolster his thoughts with real examples.

It would be intriguing to see how current researchers simply, like their Greek counterparts, have interpreted and explained human-geography relationships generally from a deterministic viewpoint to the detriment of *geographic possibilism.*

In classical antiquity, especially from the middle of the fifth century B.C. onwards, we experience accounts of an almost universally accepted *geographic determinism*. It was examined extensively and unequivocally in the medical treatise *Airs, Waters, Places* ascribed to Hippocrates, dating to the second half of the fifth century B.C.[23] The ancient view of *geographic determinism* was not altogether different from its modern interpretations. The ancients believed that individuals were the product of their physical environment; their bodily and mental capacities as well as their acts and behaviours were molded by climate and geography, not by their individual decisions and attributes.

All things considered, classical-ancient researchers were mindful of the close human-geography relationships. This mindfulness is fastidiously portrayed by Polybius, who concedes that a writer who tries to compose political history cannot be effective by only being an armchair researcher; he must get acquainted with the geography of where the events occurred:

> In the same way, the science of genuine history is threefold: first, the dealing with written documents and the arrangement of the material, thus obtained; second, topography, the appearance of cities and localities, the description of rivers and harbours, and, speaking generally, the peculiar features of the seas and countries and their relative distances; thirdly, political affairs.[24]

[23] Hippocrates, *Airs, Waters, Places*, trans. W. H. S. Jones (London: William Heinemann, 1923), 12-14
[24] Polybius, *The Rise of the Roman Empire*, trans. I. Scott-Kilvert. (London: Penguin, 1979), 12. 25. Polybius' views in Book 12 point particularly at Timaeus, whose chronicled works he vigorously condemned. Timaeus was perhaps the first Greek historian who composed a complete history of Rome and a standout amongst the most critical students of history in the period of Ephorus and Polybius.

Here the historian stresses the significance of knowing the geographical aspects of historical issues and tolerating a personal knowledge of the cities. In the same section, Polybius supports his point that ‘‘again, in the topography of cities and localities, when such men attempt to go into detail, being entirely without personal knowledge, they must in a similar manner necessarily pass over many points of importance; while they waste words on many that are not worth the trouble.’’[25]

A comparable, yet much more extensive, and scholarly treatment of the role of geography in historical writing is given by Strabo in his *Geography*:

> …It is clear that geography is essential to all the transactions of the statesman, informing us, as it does, of the position of the continents, seas, and oceans of the whole habitable earth. Information of especial interest to those who are concerned to know the exact truth of such particulars and whether the places have been explored or not: for government, will certainly be better administered where the size and position of the country, its own peculiarities, and those of the surrounding districts, are understood.[26]

Strabo additionally believes that politics and geography complement each other. He affirms that “If, therefore, political philosophy is advantageous to the ruler, and geography in the actual government of the country, this latter seems to possess some little superiority. This superiority is most observable in real service.”[27]

Plato in his *Republic* likewise contends that geographical conditions dictate the policy, regime and foreign relations. He then goes ahead to argue that:

> It would be absurd to suppose that the element of high spirit was not derived in states from the private citizens who are reputed to have this quality as the populations of the Thracian and Scythian lands and generally of northern regions; or the quality of love of knowledge, which would chiefly be attributed to the region where we dwell or the love

[25] To Polybius, this was, by far, one of the weakest links of Timaeus’ historical works. He saw himself as having a competitive advantage over Timaeus who spent fifty solid years at Athens, and never took part in any military expedition, or even visited the localities he wrote about. This is because he, Polybius, had accompanied Scipio Africanus in his African campaign against Carthage and witnessed the destruction of the city in 146 B.C.
[26] Strabo, *Geography*, trans. H. L. Jones. (London: William Heinemann, 1929), 1.1.10.
[27] Ibid, 1.1.18

> of money which we might say is not least likely to be found in Phoenicians and the population of Egypt.[28]

In any case, what is intriguing in Plato's statement above is the association of "the love of knowledge" with geography, that is, the geography of Greece. Convenient climatic conditions could help philosophy flourish. Plato's views are rehashed in Thucydides, who is of the view that "the richest soils were always most subject to this change of masters… the goodness of the land favoured the aggrandizement of particular individuals, and thus created faction which proved a fertile source of ruin."[29]

1.2.2. Geographic Determinism in the Ideal States of Plato and Aristotle

Philosophers like Plato considered every option to create an ideal state complete with its constitutions, social levels, structures and so forth. An ideal state must be established on a perfect land (an ideal land), and Plato uncovers his thoughts on the subject in the *Laws*.[30] He envisions a city, circular in form, set on a high hill for protective and hygienic reasons. At that point, he moves away from the customary Greek city plan and recommends two courses of action: The ideal city will not have walls, because citizens hiding behind city walls become pessimistic. Secondly, it will be an inland settlement, some 12-14 km away from the sea. Plato is of the view that the coastal settlement bears numerous issues: One of them is the worsening impacts of the sea trade, since the ships with their freight and passengers will bring foreign customs and traditions, religious thoughts and so on to the ideal city. The other inconvenience is the unavoidable presence of a sea fleet, which will increase the power of the people and cause a shift to democracy as well as the multiplication of cowardly people who will board ships and flee instead of fighting on land. Along these lines, the city should be established not on a fertile, but on a self-sufficient land which will prevent citizens from getting rich and the

[28] Plato, *Republic*, trans. P. Shorey (Cambridge: Harvard University Press, 1920), 435d-e
[29] Thucydides, *History of the Peloponnesian War*, trans. R. Crawley (London: J. M. Dent & Sons, 1953), 1.2.
[30] Plato, *Laws*, trans. R. G. Bury (London: William Heinemann, 1926), 779b et. seq.

economy must be based on farming. Plato additionally intends to isolate his city so that it will not have any neighbouring settlements nearby.

Plato's principles can in fact be portrayed as involving geopolitical concerns. The geopolitical position of the ideal state works in a few ways: securing the continuity of the state (no neighbouring cities that may cause hostility); shaping the characters of the citizens (sea makes people gutless); managing the economy (self-sufficient land and farming economy) and protecting the regime (sea fleet can facilitate the rise of democracy). Regardless of Plato's pessimistic thoughts about cities by the sea, the Mediterranean was at the focal point of ancient life, particularly of classical civilisation. Individuals, merchandise and thoughts were conveyed by ships, and Strabo vouches for this by writing "we must add knowledge of all that pertain to the sea; for in a sense, we are amphibious, and belong no more to the land than to the sea."[31]

Aristotle's geographical concerns about the ideal state are similar to Plato's. The area covered by the city should be large enough to bolster a lifestyle that is suited best to a free citizen who does not need to spend time on labour.[32] The settlement, wholly visible at a glance, should be founded on a fertile land in order to maintain economic independence. Yet as opposed to Plato, Aristotle does not go so far as to propose an inland settlement. The sea provides good protection and is the best means to import raw materials. In addition, a sea fleet would do no harm to the regime; this issue can, without stretching it too far, be illuminated by denying the ship crews and rowers of citizenship.

Aristotle's view of how geography influences political administration is amazing: "acropolis is best suited to oligarchy and monarchy, while the plain land of democracy."[33]

[31] Strabo, *Geography*, trans. H. L. Jones. (London: William Heinemann, 1929), 1.1.16. Similarly, Cicero praises Romulus' choice of land for Rome for its remoteness from the shore and then lists the problems that a city may encounter if built near the sea. Like Plato, he is hostile to the sea and sees almost no advantage in sea-borne activities.
[32] Aristotle, *The Politics*, trans. H. Rackham (London: William Heinemann, 1932), 7.5
[33] Ibid., 7 .11.

Another point on which Aristotle concurs with Plato is the fact that climatic conditions and geographical conditions play a dominant role on the attributes of the individual. Hence, as per him:

> People living in colder places and Europe are filled with courage and ambition, but their skills and mental abilities are limited. This is why, although capable of maintaining their independence, they cannot form a political unity or govern the others. The Asians, on the other hand, have both brains and skills, but they lack the courage and will; thus, they are doomed to slavery. The Hellenes, being geographically in the middle, had their share from both of them. Thus, they own the best political institutions and are able to maintain their independence.[34]

Aristides, the Greek orator writing in the second century A.D., by and large underscores the geographical advantages of Athens and Attica, which both ought to be cited at some length due to its exceptional content:

> … Just as its own territory is adjacent to a city, so the whole Greece is adjacent to Attica. For this reason, it alone has assured the appearance of an unblemished Greek people and is to the greatest degree racially distinct from the barbarians. For the extent that it is separated by the nature of its geography, it is also removed from the barbarians in the customs of its men. For it neither shares any common river no does it have a boundary line, which can both separate and join a land. But as if to the bearing of a shield, all things Greek from every extreme are directed to this centrally located land and on all sides Greeks encircle its territory, some from the sea, some from the mainland, as is meet for common hearth of the race… For these causes, it has always provided its people with pure and uncorrupted customs, and it also introduced, as a model for Greek speech, a dialect which is clear, pure and pleasant.[35]

Yet, here we again come across the view that the geography dictates the attributes and characteristics of the individual. What makes the Greeks superior to other nations is their location. The geographical *determinism* of races based on these Platonic and Aristotelian ideas became influential in 18th-century France.[36]

[34] Aristotle, *The Politics*, trans. H. Rackham (London: William Heinemann, 1932), 7 .15
[35] Aristides, Panathenaic *Oration*, trans. C.A. Behr (London: William Heinemann, 1972), 14
[36] Montesquieu built an image of Europe as the scientifically leading continent, because of its temperate climate. Even Rousseau, in his *Social Contract*, believed the role of geography was the dominant factor in the formation of people's behaviours and their political regimes.

1.2.3. Slavery and Geographic Determinism

These thoughts inevitably compel us to see the other side of the medallion, ancient slavery. It is a wide subject which cannot be completely examined here, yet I feel that it is important to mention some aspects of ancient slavery, since it has roots in *geographic determinism*. While Plato simply accepts slavery as a natural state without any discussion, Aristotle tries hard to justify its existence. He accepts slavery as a natural phenomenon, and that Asians are prone to be slaves because of their geographical background. Consequently, geography and climate are the factors that determine who is a slave or who is most certainly not. As indicated by Aristotle, since slaves are not capable of controlling themselves, let alone governing others, it is to their advantage that they enter the rule of the others. It is obvious that nature defines the bodies of slaves and free men from the start; one is made strong for menial service, while the other is gifted for operating both in war and peace.[37] The captives in war, on the other hand, are a different matter, because at this point the matter shifts to the question: "Which war is legitimate?" Legitimate wars are fought to oppress insubordinate individuals, who are indeed slaves by nature. Illegitimate wars, on the other hand, are against people to whom freedom is granted by their nature.[38] Aristotle's fundamental reason in indicating slavery as a natural fact is to make use of the slaves for the benefit of the citizens, so that the citizens will not be occupied with soul-degrading tasks, instead they will devote themselves to politics and philosophy. Thus, *determinism* is an instrument in Aristotle's grasp to justify his view on slavery

1.2.4. The Relationship Between Geography and Political Regimes

There is another impact of geography that requires a more detailed discussion, that is, its impact on the political administration. We have effectively noticed how Plato and Aristotle

[37] Aristotle, *The Politics*, trans. H. Rackham (London: William Heinemann, 1932), 1.5.
[38] Ibid., 1. 6.

associate geography with the formation of regimes. Several ancient sources share the same views with these philosophers. Of the many, a typical example is Pliny the Elder who argues that:

> In the middle of the earth there is a salutary mixture of the two (hot and cold regions) … the manners of the people are gentle, the intellect clear, and genius, fertile and capable of comprehending every part of nature. They have formed empires, which have never been done by the remote nations; yet these latter have never been subjected by the former, being severed from them and remaining solitary, from the effect produced on them by their savage nature.[39]

Strabo thought it was natural that the Greeks, Macedonians, and Romans in particular, have administering capacities and are able to both maintain peace and to conduct wars due to their location in the temperate zone, while the other individuals are bound to be administered, for they live in a rocky and isolated geography without any harbours:

> Take the case of the Greeks: though occupying mountains and rocks, they used to live happily, because they took forethought for good government, for the arts, and in general for the science of living. The Romans, too, took over many nations that were naturally savage owing to the regions they inhabited, because those regions were either rocky or without harbours or cold or for some other reason ill-suited to habitation by many, and thus not only brought into communication with each other peoples who had been isolated, but also taught the more savage how to live under forms of government. But all of Europe that is level and has a temperate climate has nature to co-operate with her toward these results; for while in a country that is blessed by nature everything tends to peace, in a disagreeable country everything tends to make men warlike and courageous; and so both kinds of country receive benefits from each other, for the latter helps with arms, the former with products of the soil, with arts, and with character-building…[40]

In Isocrates, Greeks are portrayed as the bringers of democracy, arts, education, and institutions. Additionally, it is inferred that the Phoenicians do not have important qualities to establish a city, when discussing the accomplishments of the Cypriote king Evagoras (ca. 435-374/3 B.C.).[41] It is only by the rule of Evagoras, a supporter of Hellenism on the island, that the Cypriote people were saved from barbarism, and taste the pleasures of life by adopting the

[39] Pliny, *Natural History*, trans. H. Rackham. (Cambridge: Harvard University Press, 1938), 2.80
[40] Strabo, *Geography*, trans. H. L. Jones. (London: William Heinemann, 1929), 2.5.26.
[41] Ibid., 9.479.

Greek way of life. This is yet another source that acknowledges the Greeks as the natural masters of governing, establishing city-states, civilisations, and performing arts.

Hippocrates is additionally intriguing when contrasting the Greeks with their kinsmen in Asia Minor:

> With regard to the lack of spirit and of courage among the inhabitants, the chief reason why Asiatics are less warlike and more gentle in character than Europeans is the uniformity of the seasons, which show no violent changes either towards heat or towards cold, but are equable. …For these reasons, I think, Asiatics are feeble. Their institutions are a contributory cause, the greater part of Asia being governed by the kings. Now, where men are not their own masters and independent, but are ruled by despots, they are not keen on military efficiency but not appearing war-like.[42]

According to him, Asiatics, are liable to slavery and despotic rule in light of their geographical setting. However, this time a hostile perspective of the Greek, is put into Cyrus' mouth by Herodotus, when his men insist on settling new lands, leaving their rugged country. "Go ahead and do this. But if you do so, be prepared no longer to be rulers but rather subjects. Soft lands breed soft men; wondrous fruits of the earth and valiant warriors grow not from the same soil."[43] It is not clear from the passage, nonetheless, whether Cyrus alludes to western Asia Minor in particular or to Greece proper, but it should be the latter that the king is alluding to, in light of the fact that earlier in the same passage the Persian Empire is said to be ruling over the whole of Asia, which most likely incorporates Ionia. This is an illustration of how uncertain the notion of *geographical determinism* is.

1.2.5. Geographic Possibilism in Classical Sources

Eratosthenes appears to have embraced an alternative different for the distinction of the people, to judge from a quotation from Strabo. His treatment of barbarians is arguably more objective, as far as we can conclude from Strabo's account than the other writers we have dealt

[42] Hippocrates, *Airs, Waters, Places*, trans. W. H. S. Jones (London: William Heinemann, 1923), 16.
[43] Herodotus, *History of the Persian Wars,* trans. A. D. Godley. (Cambridge: Harvard University Press, 1920), 9.122

with. The passage in question does not make a distinction of the Greeks and the "others" by geography or climate, but by their qualities:

> Now, towards the end of his treatise — after withholding praise from those who divide the whole multitude of mankind into two groups, namely, Greeks and Barbarians, and also from those who advised Alexander to treat the Greeks as friends but the Barbarians as enemies — Eratosthenes goes on to say that it would be better to make such divisions according to good qualities and bad qualities; for not only are many of the Greeks bad, but many of the Barbarians are refined — Indians and Arians, for example, and, further, Romans and Carthaginians, who carry on their governments so admirably.[44]

The passage does contain a Greek versus barbarian distinction in its essence; however, it is characterised by Eratosthenes not on geographical and climatic grounds but by merits and morality. Hence, even the barbarians can have admirable political frameworks, and the Greeks can be as "bad" as the barbarians.

Thucydides, with his rigorous and methodological style, prefers a more down-to-earth approach and takes an altogether different path from the previous philosophers, which is strikingly ''modern'' in understanding the realities of the world he is living in:

> (speaking of migrating peoples in Greece) …without commerce, without freedom of communication either by land or sea, cultivating no more of their territory than the exigencies of life required, destitute of capital, never planting their land… thinking that the necessities of daily sustenance could be supplied at one place as well as another, they cared little for shifting their habitation, and consequently neither built large cities nor attained to any other form of greatness.[45]

This is a passage one can anticipate written by a ''scientific'' historian as some modern scholars may call him, for Thucydides neither infuses mythological, neither records or exaggerates his narrative, but simply describes the events that occurred long before his time and he does this by arguing against each of Plato's statements. Contrary to the philosopher, he sees the lack of commerce, insufficient maritime communication and under-cultivation of the land as the primary causes of continuous migration. The key of this passage is "*shifting of*

[44] Strabo, *Geography*, trans. H. L. Jones. (London: William Heinemann, 1929), 1.4.9.
[45] Thucydides, *History of the Peloponnesian War*, trans. R. Crawley (London: J. M. Dent & Sons, 1953), 1.2.

habitation", that is man's shaping and use of geography for his needs. It emphasizes the active role that must be taken by people in order to establish large cities. Plato and Aristotle, then again, require more passive citizens in this respect. Truth be told, they do not believe the citizens and do not rely on the geographical features of the land, which will effortlessly shape the citizens for the benefit of the greater good, that is, the well-being of the state, instead of the other way around.

A comparative treatment that disregards geographical explanations was proposed by the Cynics, especially by Diogenes, who put forward a distinction between the ignorant and the intellectual. He defined himself as a citizen of the world,[46] a statement which totally rejects geographical boundaries.

1.2.6. Determinism and Possibilism in Modern Sources

One important question one may ask is what is the relation of our emphasis on geography and the alteration of peoples' way of life? As this study, shall subsequently explain a huge relation indeed exists. The following passages from modern scholars validates the importance of geography in the civilisation of men, but demonstrate how deterministic this emphasis has been.

> The rivers and valleys, the mountains, bays and island of Greece… it is useful at the very outset to grasp some general features which went to make the history of the Greeks what it was, and what otherwise it could not have been. The character of their history is so intimately connected with the character of their dwelling- places that we cannot conceive it apart from their land and seas.[47]

> Those far-flung Greeks left a priceless legacy of achievements in art, literature, politics, philosophy, mathematics, science, and war. Their story is a long and fascinating one… A history of the Greeks (*Hellenes*) must begin with the land, for the natural environment

[46] Diogenes. *Lives of Eminent Philosophers*. Trans R. D. Hicks (London: William Heinemann, 1958), 6.63.
[47] Bury J. B. and Meiggs. Russell. *A History of Greece to the Death of Alexander the Great*, 4th ed. (London: Macmillan Education Ltd, 1975), 1

> of a people – the landscape, the climate, and the natural resources – is a major factor in determining the way they lived and how they developed socially.[48]
>
> It is a poor land…but it is also a land in which a full life can be led on rather slender resources…geography and climate do not by themselves account for the manifold achievements of the ancient Greeks, but they determine some of the ways in which their civilisation grew. An examination of Greek society must begin with the physical facts.[49]

Due to the deterministic word indicators (intimately connected, determining) identified in the thesis statements of Bury and Meigs and Anthony Andrews, it can be deduced that recent or modern scholars just like their ancient counterparts most often than not used the *geographic determinism* approach in explaining human geography relations. However, that of the Pomeroy et al., has some intrinsic bearing to the arguments put forward by the possibilist. Like their possibilist counterparts, they acknowledge the fact the physical environment is not the sole causal agent of human development. Hence, this study basically seeks to highlight the views of *possibilism* but also acknowledges the fact *Geographic possibilism* is not sufficient in explaining or understanding human-geography relationships. As a result, I softly advocate for a meager of both the deterministic and possibilistic approach in explaining human-geography relationships.

1.3. Statement of Problem

The relationships between geography and human development are so boundlessly various that it would not be out of place to attempt a thorough investigation of this phenomena. One can without much of a stretch of imagination surmise from the above literature review that scholarly works on the human-geography relationships of the Greek world in general and Athens in particular, have basically subscribed to determinism. Thus, little has been said with

[48] Pomeroy et all. *Ancient Greece: A Political, Social and Cultural History*, 2nd ed. (Oxford: Oxford University Press Inc, 2008.), 1
[49] Andrews, Anthony. *Greek Society*, (Middlesex: Penguin Books Ltd, 1971), 1

regards to the possibilistic approach in teasing out the human-geography relationships. This study therefore seeks to highlight geographic possibilism as an approach to understanding or explaining human-geography relationships of ancient Athens. That notwithstanding, this researcher is of the view that depending exclusively on either one of the two approaches is insufficient to comprehend such a complex phenomenon. It is in this light that this study tends to be a soft advocate for a merger of both the deterministic and possibilistic approach in teasing out the connections that exist between human beings and their geographic environment.

1.4. Purpose of the Study

My rationale for this study therefore, is to explore the claim that robust correlation(s) exist between geography, human development and civilisation and these can best be explained or understood through the determinist approach as previous scholarship had done but also through the possibilist approach. It is in this light that I seek to examine the following issues with reference to Athens which is the main topic for discussion:

1) What are the key geographical features of Athens?

2) How, and to what extent, had *geographic determinism* been used to explain the human development of Athens?

3) How, and to what extent, can *geographic possibilism* be used to explain Athenian human development?

4) What are the gaps and interfaces of these two approaches in explaining the human development of Athens?

1.5. Scope of the Study

Any society with a deep historical record is a suitable object of investigation. The focus of this study is 5th century BC Athens and this, for a number of reasons: extended historical coverage, intense modern engagement with their evidence and the unusual degree of variability in its socio-political institutions. It was a city-state which served as the cultural epicenter and flowering of 5th century BC Greek classism. Personalities like Aeschylus, Sophocles, Euripides, Herodotus, Thucydides, Hippocrates and Socrates lived and worked in Athens and were about to leave an extremely influential piece of work as a heritage to us all. It is for this reason that this study decides to peg this research to ancient Athens.

1.6. Methodology

This research is a purely qualitative one that will use the historical, ethnographical and human-geography approach (*geographic determinism* and *geographic possibilism*). This is because past events, problems and salient issues and factors about the Athenian society in 5th century BC, in relation that relate to geography, will be described to recreate the past that could help answer the questions raised above. To develop an in-depth analytical description of these Athenian systems, processes or institutions the ethnographic approach will be employed. In addition, this study would expound on both the determinist and possibilist theories in order to tease out the assumed correlations that exist between humans and their environment (geography).

As explained in the forgoing, *determinism* supports the view that geography (environment) controls human action. Accordingly, history, culture, life-style and stage of development of a social group, society or nation are exclusively governed by the physical factors (like, terrain, climate, fauna and flora) of the environment. However, this study will

also share the view which generally considers humans as both passive and active agents, that can influence and be influenced by geographic factors. Thus, the thrust of this study will be misguided if the possibilism approach in studying the human-geography relationships is not considered.

Moreover, this study will collect extensive narrative sources from literature based on thematic variables (physical geography, human livelihood, politics, culture, religion…) in 5th century Athens. To achieve the aims set out above for this study, the background, development, conditions, institutions and geography of the Athenian society would be revisited and analysed for patterns and relationship between geography and human development.

Both the primary and secondary sources of literary information will be consulted. Classical texts in translation are the primary sources that will be considered in addition to the secondary literature which border on the areas of classical geography, history and philosophy, social and political commentaries and interpretations. Books, monographs and journal articles would constitute the secondary sources all of which will be reviewed and cited for evidence of claims and conclusions that would be made in this work. All these, notwithstanding, it is however very important to note that all retrieved internet information would be closely scrutinized to avoid misrepresentation and establish credibility.

1.7. Definition of Key Terms

- **Geography:** The content, scope and emphases of geography have undergone considerable change over the past 50 years and it is highly unlikely that any one definition of the word would satisfy everyone. However, the Oxford English Dictionary gives six definitions of "geography" of which only three will be considered for the purpose of this research: (1) 'a treatise on the physical

features or characteristics of a region; a textbook on geography'; (2) 'the field of study concerned with the physical features of the earth and its atmosphere, and with human activity as it affects and is affected by these, including the distribution of populations and resources and political and economic activities'; (3) the geographical features or topography of a place or region; a place or region, or terrain, as characterized by such features'. Since this research is about the relationship between geography and human development, (2) can be integrated into (3) to get (4): the geographical features (landforms and ecosystems) or topography of a place or region (ancient Athens) with human activity as it affects and is affected by these. Definition four (4) shall be my operating definition or conception of geography.

- **Human development:** consists of system of beliefs, values, practices and institutions which could induce a sustained unfolding of individuals' creative and other capacities to enable them to continuously satisfy their basic material, mental and social-psychological needs.

- **Geographic/Environmental/Climatic determinism:** the notion that the physical environment has a massive and often controlling (and perhaps never-changing and generationally stable) effect on human beings, in essence dictating their abilities in all realms of life and society.

- **Geographic/Environmental/Climatic possibilism:** It claims that cultures are the result of human agency and action, and that the physical environment is to some extent a non-issue. *Possibilism* gives some credence to the environmental role, seeing it more from the position of an influencer than a determinant.

- **Geographic/Environmental/Climatic probabilism:** sometimes seen as a compromise or synthesis of *environmental determinism* and *environmental possibilism*, but more rightly seen as a more open-ended treatment of the possibility that sometimes the environment is a key influence, while at other times human actions are more so. Often tied to this discussion is the notion of cost-benefit analysis of any human actions with relationship to the environment.

1.8. Limitations

There are several noteworthy limitations in this study that need to be acknowledged and addressed. The primary texts intended to be used in this study provide a detailed account on the geography of ancient Greece in general, not merely on Athens, let alone Athens in 5th century BC. This will, therefore, serve as a challenge to specifically draw an unbiased picture of the human-geography relationships/correlations that existed in the period under study. However, to avoid this limitation from causing any damage to the study's line of argument, only certified secondary sources of literary information relevant to the geography and life of 5th century Athenians will be consulted. This is because these secondary sources are somehow embedded with the requisite information needed to facilitate a better understanding of the theme of my study.

Explaining the concept of human-geography phenomenon is, perhaps, one of the most significant issues that arise when carrying out a research of this nature. While on face value there seems to be a straight forward explanation, facts seem to be lost in translation. With this in mind, this study will only review some of these literary stands as and when the need arises.

This study might be viewed as prejudiced since the causes of or reasons for human development of Athens in the 5th century are not entirely geographic. It is in this light that in

presenting interpretations and conclusions, this study will in no instance suggest that, the other socio-economic and political causes are irrelevant. However, it firmly reiterates its stands that of the many causes of or reasons for the remarkable human development of Athenians in the 5th century, the human-geography correlations were partly responsible.

The issue of relevance (why study the human-geography relationship of Ancient Athens?) is yet another constraint of this study. This concern arguably contends that this issue has never at any point been resolved but has rather submerged underneath a puzzling cluster of less antagonistic issues that have added to disarray and amplified the inconclusive nature of this study. Understanding the issue is both an obstruction and a peril to objective research.

Another issue would be the literary works reviewed for this study. Some essential primary sources are translations of ancient Greek texts and a significant part of the rest is the product of commentaries on these (primary sources) texts and topic at hand. The secondary literary sources utilized would be viewed as more critical than essential sources in light of the fact that the analysis either goes straightforwardly to the heart of the matter or is considered important to the comprehension of applicable issues. The primary sources that will be employed, however, are principally from ancient writers who helped to establish the beliefs and ideologies that contributed to the role of geography in human development.

1.9. Significance of the Study

One of the main purposes of doing research of this nature is to make the product serve as a reference source to scholars, researchers and students in the humanities in general and those in Geography and Classics in particular. The global appeal and multifaceted elements of the study will make it a contribution to scholarly investigation and knowledge.

In addition, the significance of this study lies in the acknowledgement that its problematic concept (human-geography relationships) will engage the academic community and provide fresh understanding of the deterministic argument as well as its possibilistic attributes. Even though there are evidences that show that attempts have been made to eliminate the traditional approaches identified above, the study will reveal that human-geography relationships needs a renewed critical attention, or, perhaps, a new or different approach of study. In the end, awareness and understanding of these concepts is a reasonable way to understanding our very existence.

Finally, the import of the role of geography on human development in ancient Athens is revealed as an open window to better understand the foundations of human development. As a response to the misconception that Graeco-Roman antiquity is irrelevant to the contemporary concerns of a developing society like Ghana, this research attempts to demonstrate that the Graeco-Roman experience and that of Athens, to be precise, is an essential element in the trajectory of humanity's historic development. That notwithstanding, this study appreciates the common heritage of humanity's historic responses to the basic, universal challenge to secure survival and advance its well-being.

1.10. Geography of Ancient Athens in Brief

Surrounded by the Mount Parnitha in the north, Mount Aegaleo in the west, Mount Hymettus in the east, Mount Penteli in the northeast, and the Saronic Gulf in the southwest, Athens extends itself over 2,928 km² of land. Slouched across the central plain of Attica, the city is covered with gorges, caves, springs, torrents and well-marked paths. The tallest peak is hosted by the Mount Parnitha. Parnitha is around 4,767 ft tall and is recognized as the national park of Athens. Acropolis is 512 ft tall and is flat topped. River Ilissus flows through Athens and

contains a lot of water after winter storms. The plains of the city consist of isolated limestone hills, including the Lycabettus or Lykavittos, which ascends about 339m above the sea level.[50]

Athens experiences a typical Mediterranean type of climate with mild winters and hot summers. The city is hot and dry in between July and August. Sometimes, the summer in Athens is also prone to smog due to the pollution related conditions in the city. Spring and autumn are pleasant, going milder towards winter. Spring is from May to June and autumn is from September to October. Rainfall is sparse and is enjoyed from mid-October to mid-April. Sometime, few showers are also observed in summer. Athens also experiences snowfalls almost every year. Fog is unusual and is generally behind the Hymettus mountain range towards the east.

1.11. Outline of the Study

Of the four chapters that this research would be divided into, this first Chapter includes a brief introduction to the study, literature review, statement of problem, purpose of the study, scope of the study, methodology, definition of key terms, limitations, significance of the study, geography of Athens in brief and finally this outline. Chapter Two and Three will both examine the theoretical and contextual frameworks of *geographic determinism* and *geographic possibilism* respectively. This would help this study in adopting a working approach to understanding the human-geography relationships of Ancient Athens and highlight any discrepancies where possible. Subsequently, these two chapters will apply the two approaches to the Athenian experience. In Chapter Four the two approaches previously discussed will be

[50] See map for details

analysed to identify the points of convergence and divergence. Together with some reflections, a conclusion to the whole study will be made.

CHAPTER TWO

GEOGRAPHIC DETERMINISM AND ANCIENT ATHENS

2.0. Introduction

To develop a suitable approach and methodology for the current research, this chapter proceeds by dividing its discussion into two basic parts. The first part examines the context of how people interact with their environment and how *geographic determinism* as a theory of human-geography relationships has developed over the years. This part concludes with how *geographic determinism* with reference to human development can be applied to understanding the human-geography relationships of ancient Athens. Part two considers key geographical features such as landforms, flora and fauna, drainage systems and climate of ancient Athens specifically from a deterministic perspective. It also reveals the inadequacies of *geographic determinism* and how this theory or approach alone is insufficient in explaining or understanding the human-geography relationships of ancient Athens. These revelations would, then, be a spring-board for subsequent examination of other alternative(s) that would be discussed in the next chapter of this research.

2.1. Human-environment Interactions

Human-environment interaction is a phenomenon which describes how human beings interact with their environment to obtain their needs from it, and how the environment, in turn, responds to these interactions. The physical and human characteristics of a place provide keys to understanding the interrelationships between people and their environments. On the other hand, it indicates how humans themselves depend on, adapt to, and modify the environment to ensure their survival. The acronym DAM (Depend-Adapt-Modify) will be used to explain three key concepts that underlie human-environment interactions.

1. Depend: Humans depend on the environment to obtain resources for their survival as well as development of their civilisation. These resources include food, clean drinking water, timber for construction, fiber for clothing, coal and natural gas for industries and energy, etc.
2. Adapt: Humans have to adapt to those conditions in the environment which they cannot modify, to ensure fulfillment of their needs. Examples of such conditions include, building houses on higher ground in flood-prone areas, using the natural slope of the land to transport water for irrigation, wearing warm clothes in colder climates and vice versa, etc.
3. Modify: Humans can modify the environment to make it easier to extract resources, so that their needs are fulfilled in a better way. Such modifications can include drilling holes in the ground for oil extraction, building dams for water storage and flood control, farming on terraces to increase crop production for a large population, etc.

2.2. Outlines of the Historical Antecedent of Geographic Determinism

The simple definition of *geographic determinism* is that the natural environment is responsible for all human actions. However straight forward that may show up was blurred by many years of critical review and debate. Among the issues that have skewed the definition is the way that some significant voices in the development contended that the idea was just proposed as another instrument for scholars and not an all-inclusive idea as its critics appeared to attest. At that point, there were shades of significance surrounding the meaning of both environment and *determinism* with some in both camps proclaiming for either widening the definition or taking a slender perspective. Moreover, the hidden convictions from which the idea seems to have formed reach out far into the faint past of mankind's history that loans

weight and a feeling of authenticity with strings interfacing with ancient cultures as confirmed by significant literary works from long ago.

As a logical hypothesis, *geographic determinism* was established in the last nineteenth Century by Friedrich Ratzel. He was thus significantly impacted by Herbert Spencer's point of view on Charles Darwin's hypothesis of natural selection that gave a conclusion to the role of breeders who chose particular genetic traits to produce distinctive types of domestic animals. Before long, other different scholars grabbed the possibility that appeared to guarantee a positivistic way to deal with the investigation of human-geography relationships. Among the individuals who led this determinist development were Ellsworth Huntington, William Morris Davis, Griffith Taylor, and most prominently, Ellen Churchill Semple. Together, they added to the development and spread of the belief system that hit at the heart of human geography in which the relationship between humans and their geographic environment led geography into the curriculums of higher education.

Early on, two perspective gained precedence known as *environmentalism* and *geographical determinism*. These contributed to a widening interest in theoretical constructs that were thought could provide the means for scientific measurement of factors and strength of the relevant social impact.[51] While the challenges to develop such measurements proved daunting, American geography was boosted by an influx of scholars who sought to identify discreet features in human behaviors that could be tied to elements found in the natural world. Intriguing leads were presented in the geographic journals, sometimes exceeding credulity, but significantly hopeful in their suggestion that the social sciences may well study human behavior in terms of mechanistic relationships. Such cause and effect associations would have put human geography on par with the physical sciences in which *determinism* was axiomatic. Over time,

[51] R. Hartshorne, *Perspective on the Nature of Geography* (Chicago: Rand McNally, 1966). 66

efforts to link humans and environments attracted considerable criticism as contrary examples began to emerge. Nonetheless, *geographic determinism* played a role in making American geography an analytical science instead of that of a descriptive gazetteer. The major contrary positions that opposed the deterministic perspective included *possibilism* and *probabilism* which also contributed the way geography is studied today as an analytical discipline because:

> These two positions were not consistent extensions of the metaphysical concepts of free will and determinism…possibilism denied environmental control but not necessarily other determinants…But, since environmentalists never completely excluded cultural factors, they differed from possibilists and especially probabilists only in degree. Nor has any challenge to determinism eliminated deterministic systems…Alleging, that antithetical constructs may play complementary roles in objective geographical analysis.[52]

In the mid-twentieth Century, support for environmental determinism was widespread but by depending on to a great extent deductive methods researchers like Semple made the very normal mistake of neglecting to look for illustrations that were inconsistent with the hypothesis. Rather, she tended to choose examples that supported her theory. Still, Semple never argued that the physical environment alone was the root of all human development and culture but rather she abstained from using the word control while crediting human development to environmental causes. Semple was mindful to say that only under certain circumstances was there a tendency for people to behave in predictable ways[53] In *Influences of Geographic Environment*, Semple reported that:

> Man can no more be scientifically studied apart from the ground which he tills, or the lands over which he travels, or the seas over which he trades, than polar bear or desert cactus can be understood apart from its habitat. Man's relations to his environment are infinitely more numerous and complex than those of the most highly organized plant or animal. So complex are they that they constitute a legitimate and necessary object of special study…[However], man has been so noisy about the way he has conquered

[52] Lewthwaite, Gordon R. "Environmentalism and Determinism: A Search for Clarification." *Annals of the Association of American Geographers* 56, no. 1 (1966): 1

[53] James, P. E. & Martin, G. J. *All possible worlds: A history of geographical ideas* (2nd ed.). New York: John Wiley & Sons. 1981. 306

> nature and Nature has been so silent in her persistent influence over man, that the geographic factor in the equation of human development has been overlooked.[54]

The idea of *geographic determinism* starts with by conceptualizing the term environment, which implies in its broadest sense: the aggregate of one's surroundings; the entire of all circumstances incorporated into those environs and may incorporate distinctive shades of significance relying on the social understandings. As indicated by a review of a few lexicon definitions, the environment may include both the natural panorama as well as the built-up surroundings of humans. Contingent on reference, geoscience may incorporate biological systems, biomes, scenes of both known and obscure spots and in addition any variety of human activities that characterises such places. Terms like, determinism, deterministic, and determine all suggest cause and effect relationships that are vital for positivistic analysis. Despite how these terms might be connected, the outcome fails to satisfactorily clarify the confusion and misguided applications that have occasioned *geographic determinism*.

2.3. The Athenian Roots of Geographic Determinism

2.3.1. Determinism in Athenian Mythology

Ancient cultures envisioned the world to be full of fearful and mysterious phenomena that, without explanatory reasoning, mythology became the order of the day. In those times, people had a tendency to perceive their existence as suspended between the heavens and earth and as insignificant toys of the divine beings (gods). Everyday life included innumerable activities aimed at maintaining a favourable equilibrium with the gods who represented mysterious elements such as winds, storms, and many others. Ancient Greek mythology incorporated various creation myths that, in turn, had numerous

[54] Churchil E. Semple, *Influences of the Geographic Environment: On the Bases of Ratzel's System of Anthropo-Geography* (New York: Henry Holt and Co, 1911). 204

varieties. A large portion of these contained some sort of wonderful birth stories in which humans were the inevitable result of a dynamic blend of two natural elements, for instance, Earth and Sky (Uranus). The following Olympian creation myth is an example.

> Mother Earth emerged from Chaos,
> And bore her son Uranus as she slept.
> Gazing down fondly at her from the mountains,
> He showered fertile rain upon her secret clefts,
> And she bore grass, flowers and trees,
> With beast and birds proper to each.[55]

Another Mother Earth variation offered the first human, Pelasgus, ancestor of the Pelasgians; who sprang from the soil of Arcadia.[56] The implication of these ancient Greek creation myths was that humans were tied to the environment and subject to natural laws.

2.3.2. Determinism in the Old Testament

This association between the natural world and humankind proceeds in the Judeo-Christian writing. The creation story found in Genesis imparts the primordial linkage of man and nature, in which:

> God formed the man from the dust of the ground and breathed into his nostrils the breath of life, and man became a living being. Now the LORD God had planted a garden in the east, in Eden; and there he put the man he had formed. And the LORD God made all kinds of trees grow out of the ground – trees that were pleasing to the eye and good for food. In the middle of the garden were the tree of life and the tree of the knowledge of good and evil.[57]

This Old Testament proclamation has assumed a part in the convictions held by quite a number of Christians that humanity is an immediate result of the natural environment by way of a divine action. Present day clarifications and understandings of

[55] R. Graves, *The Greek Myths*, 15 ed. (London: The Folio Society, 2003). 35
[56] Ibid, 35
[57] Genesis 2:6-7. qtd. in The Holy Bible. (1953) New York: Thomas Nelson & Sons (originally published in 1611).

the normal world were, to some degree, a product of ancient beliefs and explanations that connected the natural world to cosmological phenomena.

2.3.3. The City States and Determinism

In the Greek world of the far-off past, the city-states were fundamentally signs of a society that reflected convictions about the extraordinary position of civilised man as a modifier of nature. To a great extent comprising of rough, mountainous landscape, their social world was for the most part, found in little, detached groups and solitary ways of life that were all around adjusted to fit the surrounding geographic conditions. Despite the fact that approximately amalgamated as one society, they created novel traditions and customs, constitutions, and religious rituals in relative disengagement. Except for the different affiliations or associations of city-states, the Greeks showed no yearning to make a unified system in the sense that the Romans did yet, rather praised their solitary autonomy from any extraterritoriality applying any impact over their way of life. Ironically, they likewise commended their mutual Greek society in an assortment of ways including the athletic rivalries that incorporated the Isthmian Games and the Olympics.

2.3.4. Determinism in Religious Ceremonies

Ironically, the cities were dependent upon the surrounding countryside for much of their sustenance; however, the problem of storing food meant that survival was generally a day-by-day matter. The kinds of foods available changed dramatically depending on the seasons, and in the event of crop failure the city was in for tough times. As a result, the forces of nature were reflected in their numerous religious rites, festivals, and fasting all of which were taken very seriously. Mumford portrayed this nexus of civilisation and nature as a philosophy of universal law, of fixed unalterable order, of inflexible devotion to duty, come

what may, corresponds ideologically with the new esthetic of the town plan, equally bent on order, [and] equally undeviating.[58]

In the earliest human cultures, nature became interwoven into the fabric of social traditions and religious beliefs. For example, fertility rites were typically associated with autumn while purification ceremonies were invariably spring events. These were cultural adaptations to a mythologized environment reflecting the basic idea that humans were natural products of nature. In later Greek times, a kind of counterculture developed, espoused by various schools of philosophy that viewed humans as elements of the natural world rather than simple playthings for the amusement of the gods.[59] These patterns were found everywhere among the most civilized human societies as well as in nature where purpose is ingrained in all natural processes.[60]

The writings produced by the Greeks during the Classical Age, encompassing the years between the beginning of the Persian Wars (490 - 479 BCE) through the end of the Peloponnesian War (431 - 404 BCE), offered many examples of how far-reaching the influence of nature was on nearly every aspect of Greek life. The Greeks were famous for their thinking about worldly ideas as well as abstract concepts, such as philosophy and mathematics, which was due, in part, to the opportunities made possible by the world in which they lived; the polis. The inestimable belief that their world represented the highest order of civilisation helped foster a sense that anything was possible. Further, it was attributed to the very structure of the Greek polis in which a complexity of social opportunities, meeting places, and substructures were available that contributed to the spread of new ideas and the transmission of knowledge.[61]

[58] Lewis Mumford, " The City in History: Its Origins, Its Transformations and Its Prospects.," *Houghton Mifflin Harcourt* 67 (1961). 180
[59] Smith, M. (1960). *The ancient Greeks.* Ithaca, NY: Cornell University Press. 15
[60] Mumford. Op Cit. 148
[61] Mumford, op. cit. 148

2.3.5. Determinism and Stoicism

Zeno of Critium taught in the Stoa which was as a kind of porch providing shade a pleasant environment for intellectual discussion. Stoicism was directly relevant to the physical surroundings in which it developed. The balance among the cultural elements and the natural landscape was reflected in the philosophy of stoicism that believed in an ordered universe in which human culture could be ordered and logical. It promoted the health of its citizens and that leisure should be afforded as well as time for intellectual pursuits. Stoicism encouraged free speech and promoted democratic ideals that reflected man's nature in a natural world.[62]

Arts of contemplation and disputation grew to occupy an important role in ancient Greek culture and eventually became the world's first secular religion. Philosophy could debate any issue from esoteric and metaphysical to pragmatism and realistic. No wonder that individuals such as Plato and Aristotle devoted their time and attention to examining the structure and benefits of life in a city. In the city, there was the freedom to study, learn, and communicate as was nowhere else in the world so productive. They recognized their world was unique because in the polis knowledge was respected and preserved for the benefit of posterity.

2.3.6. Determinism in Architectural Planning

Practical maxims such as those attributed to Hippocrates were often quoted in support of city planning, especially regarding the importance of constructing numerous reservoirs, water fountains and cisterns in order to make cities more livable. Further, the Greek polis provided many outlets for leisure activities that were widely available and promoted their

[62] Mumford, ibid., 185

healthful benefits. It was during these leisure activities that politics became the sport of all citizens, while philology, philosophy, and education gained acceptance as viable career paths. Order and geometry were clearly drawn on the landscapes of Miletus and Thurium by the great architect and city planner, Hippodamus. His ideal city as a reflection of humans over nature was recreated by Pericles in Piraeus, the port city of Athens and one of few Greek cities that broke with tradition and adopted the geometric grid plan invented by Hippodamus.[63]

The issue of city morphology grew out of the early city planning ideas introduced in Miletus on the Meander River. Located in Asia Minor, contrasted with the order of city of Miletus was noted for its winding course. While Miletus developed regularity and orderliness based upon rectangles that stood in stark contrast to the messiness of nature, some, like Plato, were opposed to the geometric city, which he considered a mistake. His chief concern was that a grid-patterned city would permit easy access by barbarian invaders. He felt the environment should determine city morphology and that irregular streets would provide an extra measure of security because only the residents could easily find their way around the myriad complexity of streets following the natural topography. Nonetheless, the geometric city plan appealed to many Greeks who envisioned a world in which civilisation transformed the landscape to fit the collective interests of the polis.[64]

This crucial point cannot be over emphasized because it was the structural form of the polis and the accompanying intellectual character of the Greeks that was subsequently recapitulated throughout the whole of Western civilisation. During the 1880s, Henry Tozer delivered a series of lectures on the geography of Greece reflecting the perspective that the physical conformation of the Greek continent was the single most

[63] Mumford, op. cit. 193
[64] Ibid. 119

important factor that resulted in the Greek character.[65] He claimed that the structure of the Greek polis exerted such a powerful influence over their politics that Europeans and their colonial offspring recreated the Greek vision of order among the chaos of nature as a central theme infused into the architecture of their cities.[66] Among those, Aristotle was concerned with truth and understanding that viewed as only possible from personal experience with the natural world, and that the polis was the highest expression of the natural world.

2.3.7. Hippocratic Determinism

Hippocrates, famed for the Hippocratic Oath, expressed some thoughts on the idea on environmental causation in his writings of the 4th Century B.C. E. He applied pragmatic techniques of investigation into human ailments and recorded the effects of various treatments in his quest to find real causes for sickness. His investigations of cause and effect were recorded in his book, *Airs, Waters, Places*[67] in which he registered surprise by how simple changes in the natural environments had enormous effect on human health, noting that:

> The climate, the seasons, the winds, the topography, the drinking water, and the relative exposure to those elements determine to a great extent the physique, temperament, intelligence, and therefore even the culture of the people who live there.[68]

Further, Hippocrates made shrewd observations about the geography of disease and the role of the environment in shaping the health of a community, considered both the psychological and physical health of the inhabitants in the regions he observed.[69] Bilski noted

[65] Mumford, op. cit. 119
[66] Ibid., 120
[67] Hippocrates, *Airs, Waters, Places*, trans. W. H. S. Jones (London: William Heinemann, 1923). 54
[68] Ibid., 55
[69] Hippocrates, op. cit., 56

that Hippocrates'studies on, how environments affect organisms should properly belong to the field of ecology and that pushes back the study of human ecology more than a thousand years.[70] Further, he stated that ecology was, in part, ~~–t~~he study of how environments affect organisms and credited Hippocrates as the principal pioneering figure in the study of human ecology.[71] As an associate professor of history at the University of Arkansas, Bilski conducted extensive studies on ancient cultural attitudes and relationships with the environment. Among his analyses, he claimed that the philosophical orientation of Aristotle was founded on the physical environment. He began with the idea that ~~–d~~evelopment and functioning of all organisms is intricately interwoven with the physical environment.[72] He suggested that this interrelationship went beyond the physiological dimension, resulting in human behaviors that responded to the interactions between organisms and affected the development and functioning of humans. He stated in *Metaphysics* (ca. 370 BCE), that, all things are ordered together somehow . . . and the world is not such that one thing has nothing to do with another, but they are connected.[73]

2.4. Determinism of Geographic Conditions

Geography is a major force that has influenced the rise of civilisations and the culture of communities since the dawn of history. This was the case with Ancient Greece which thanks to its geography was split into city-states. One of these was Athens, a powerful city-state. Ancient ruins provide a vivid testimony to the glory of Athens, hailed by many as the cradle of western civilisation. It would therefore not be wrong for one to enquire if their physical environment (geography) served as a possible reason for or cause of those remarkable

[70] L. J. Bilsky, *Historical Ecology: Essays on Environment and Social Change*, 1 ed. (Port Washington, NY: National University Publications, Kennikat Press, 1980). 55
[71] Ibid., 55
[72] Ibid., 53
[73] qtd. In Bilski, 55

achievements and outstanding human development. It is against this backdrop that the second part of this chapter would suggest that, the correlations that exist between the physical environment, human development, and the ancient Athenean city-state can to some extent be understood and explained from a deterministic view point. However, this part would also suggest that this approach is insufficient to understanding and explaining the human-geography relationships of ancient Athens.

2.4.1. The Land of Ancient Athens

The landscape is very rugged, with mountains covering almost 75 percent of the land. Only about 30 percent of the land can be cultivated at all, and only about 20 percent is classified as good agricultural land. Except in the northern mainland, where there are extensive plainlands, the mountains and lower hills cut the land into many narrow coastal plains, and upland plains and valleys. The mountain ranges, which are not terribly high (300-800 feet) but quite steep and craggy, made overland travel very difficult in antiquity, and somewhat isolated the small valleys and their people from one another.

2.4.2. Ancient Athens and its Drainage System

By far the easiest way to travel was by sea, especially in the islands and the southern mainland, where the coast is never more than 40 miles away. With Athens close to the sea, ancient Athenians realized their destiny as a seafaring people. Ancient Athenians used sea travel as their primary mode of transport. Athens, alongside many other Greek city-states that were located close to the coast, depended on the sea for trade. Because Greece lacked materials such as precious metals and had little farming land, trading with foreign cities allowed ancient Athens to grow and prosper as a city-state. Throughout antiquity, the Athenians were tied to the Near East and Egypt, commercially, culturally, politically, and militarily as a result of its location. The commercial contacts were vital, for, with the exception of building-stone and

clay, Athens was not well endowed with raw materials. The necessity to trade over-seas for raw materials, especially for bronze, destined the Athenians very early in their history to take to the sea and mingle with people from the other, older civilisations to the east and south.

2.4.3. The Mediterranean Climate of Ancient Athens

The Mediterranean climate is semiarid, with long, hot, dry summers and short, cool, moist winters, when most of the rain falls. In the summer, its average temperature can reach around 80 degrees. The generally mild weather permitted outdoor activity for most of the year and this climatic system allowed ancient Athenians to spend plenty of time outside. This affected Athenian lifestyle and culture, since the Athenians were able to be active within their city. For example, many Athenians would meet in public forums outside to discuss the latest news and debate public issues.

2.4.4. Flora and Fauna, Food and Drink

Generally, the soil and climate adequately supported the "Mediterranean triad" of grain, grapes, and olives. Bread, wine, and olive were the staples of the Greek diet throughout antiquity. Grains-wheat, barley, and oats-grow well in Greek soil, having been cultivated from native wild grasses. Olive trees and grapevines indigenous to Greece and Athens for that matter also flourished in their cultivated state. Legumes (peas and beans) and several kinds of vegetables, fruits (especially figs), and nuts, rounded out and varied the basic components of bread, porridges, and olive oil. Cheese, meat, and fish, which are rich in proteins and fat, supplemented the diet; however, meat provided a very small part of the average family's daily food intake, and because fish are not abundant in the Mediterranean, they were usually eaten as a small "relish" with the meal. Honey was used for sweetening, and various spices enhanced the flavour of food. Though it might appear monotonous in modern times, the Athenian diet

was healthful and nourishing. The pasturing of small animals did not interfere with agriculture. Flocks of sheep and goats grazed on hilly land that could not be farmed and on the fallow fields, providing manure in return. As suppliers of wool, cheese, meat, and skins, they had great economic importance. Herds of cattle and horses did compete with agriculture, since the stretches of good grazing land they required were also prime farmland.

2.4.5. Absolute Geographical Location and the Need for Expansion

Since the Athens' position and the geography of Greece as a whole meant that the city-state lacked several essentials such as fields for raising livestock and enough living space to support a larger population, the ancient Athenians were driven to expansion. The Athenians thus ventured further afield to establish colonies loyal to the city-state. By 454 B.C., Athens controlled a large empire made up of islands such as Lesbos and Chios, which would provide troops for Athenian wars.

2.5. Conclusion

The foregoing conclusions, especially that on the human-geography relationships, are extrapolated, because most of the literary works used in this regard do not necessarily focus on the Athenian human-geography relationships, there is not enough space to provide a full account of their physical bases. However, the extrapolation is intended to give a bird's eye view of some of the deterministic nature of their physical environment—effects that are otherwise widely scattered and largely invisible.

In this regard, the sea proved to be critical to Athens, since contact with other city states and possibly some civilisations such as that of Egypt and the Near East considerably contributed to the advancement of Athenian human development. Despite the easy accessibility of the sea, however, farming and animal husbandry remained essential ways of life throughout

Athens. Generally, the land, sea, and sky proved to be precarious bases of survival and subsistence, prompting the Athenians to divinise and worship the elemental forces associated with them. Further, the nature of the land, the accessibility of the sea, and the relative self-sufficiency of individual communities encouraged the survival of small and independent city-states like Athens, rivalling and warring against each other. Endemic rivalry impacted positively and negatively on the internal development of the city-states. Moreover, whereas in antiquity the cold of northern Europe invited a private, indoor existence for most Europeans, the Mediterranean climate, generally warm for most part of the year, encouraged the Athenians to live a public life. Consequently, there evolved the need to succeed in front of one another and to fear the open shame of failure. This public life was reinforced both by the architectural layout of Athens that tended to bring people out together, thereby increasing its cosmopolitan character as a consequence of international sea- borne trade. The resulting intense socialisation contributed to the evolution of an open society dominated by the institutionalisation of argument, discussion, and debate, a sociocultural situation that the advent of literacy helped to promote and sustain the development of individuality and critical rationality.

CHAPTER THREE

GEOGRAPHIC POSSIBILISM: THE ATHENIAN EXPERIENCE

3.0. Introduction

Following from the above literature review, scholarly works on the human-geography relationship(s) of ancient Athens have mostly been deterministic but less possibilistic. However, this researcher is of the view that depending solely on either one of the two approaches with particular reference to the Athenian human development is not enough to understand or explain this complex phenomenon that there is a need for a merger. This chapter has been developed against this backdrop and in order to meet the objective: How, and to what extent, can *geographic possiblism* be used to explain Athenian human development? set forth in the preceding chapter of this study. It would therefore proceed by dividing its discussion into two basic parts.

The first part examines the context of how people/societies interact with their physical environment and how *geographic possibilism* as a theory of human-geography relationships has developed over the years. This part concludes with how *geographic possibilism* can be applied to understanding the human-geography relationships of ancient Athens. Part two considers the correlations that exist between the Athenians and their environment from a possibilist point of view. It also reveals the inadequacies of *geographic possibilism* and how this theory or approach alone is insufficient for explaining or understanding human-geography relationships of ancient Athens. These revelations would, therefore, serve as a break point for this current research since it would go a long way to reaffirm the writer's position that *geographic possibilism* is an insufficient approach to understanding or explaining the ancient Athenian human development.

3.1. Athens: A Brief Geography and Historical Perspectives

Athens, which lies in the basin of Attica between Mts Parnes, Penteli and Hymettus, on the shores of the Saronic Gulf, is today the capital of Greece and the country's largest city. It's vital geographical position and the mild climate where the basic reasons why it was chosen for human habitation at a very early date. During its history, the brilliant cultural achievements of Athens made an invaluable contribution to the human heritage.[74]

3.1.1. Prehistory

The human habitation of Athens began to take on organised form as far back as the Neolithic Age, around 4000-3000BC, when settlements where established on the rock of the Acropolis (near the north slopes), in the vicinity of the Ilissus River (where the temple of Olympian Zeus now stands), and in Mycenean times (1550-1050) there was an important town on the Acropolis. Excavations have shown that early in the thirteenth century BC the palace of the Mycenean king was erected on five flat spots on the Sacred Rock. In the middle of the same century, the Acropolis was walled for the first time, with a structure later known as the Pelasgian Wall. At the same time, a secret water cistern was dug on the north-west side of the Acropolis, thus ensuring that the city would have a supply of water when besieged.

Athens later went through series of revolutions and evolutions until its final fall in the fourth century B.C., which for lack of time and space cannot be detailed here, though a few salient ones can be noted. The sources indicate that the first king of the city was Cecrops, ruling over scattered settlements which were later unified under the leadership of Athens by Theseus, after the Mycenean period. In the seventh century, the power of the monarchy passed into the hands of the aristocrats, with Draco being appointed in 624B.C. to codify the laws of the city.[75]

[74] Maria Mavromatari & Fotini Svarna, *8,500 Years of Civilisation: Greece between Legend and History*. 20
[75] Maria Mavromatari & Fotini Svarna, Op. Cit. p.22

Then in 594 B.C., the Athenians commissioned Solon to compose a new code of laws for the city. Solon's innovations gave the system of government a democratic tone, in that the offices which could be held by the citizens and the obligations to which they were subject were determined in accordance with their income. But the city lived under a tyrannical form of government from 561B.C to 510B.C under Pisistratus and his two sons, Hippias and Hipparchus, but they were overthrown, and the city regained her democracy in 510B.C.[76] Then came the Persian Wars in 490B.C to 479 B.C in which Athens led effectively Greek resistance to the Persians. And then the Peloponnesian War between Athens and Sparta in 431 B.C with the defeat of Athens in 404 B.C.[77]

Although Athens made an attempt to regain a position at the heart of Greek affairs by setting up a second League in in 379 B.C., the city was conquered by Philip II of Macedon in 338 B.C., thus ending the rise and fame of ancient Athens.[78]

3.1.2. Human-environment Interaction

Humans interact with their environments in many ways: they may manipulate natural environments for economic purposes and change their surroundings using culture and technology. Human-environment interaction generally falls into three categories, which include adaptation, dependability and modification. Human adaptation to the environment means that people adjust to the natural conditions around them without altering lands and other physical features. In some places characterized by extremes in temperatures and weather conditions, such as Antarctica, northernmost latitudes and tropical locations, adaptation is the most common theme in human-environment interactions. This is because the weather patterns

[76] Ibid. 23
[77] Ibid. 24
[78] Ibid. 24

significantly influence the lifestyle of the inhabitants living in such areas. Occasionally, natural hazards, storms and disasters such as floods, earthquakes and tornadoes, change the way that humans organize their lives and even influence their personal and economic activities.

Humans can also modify their environments by building roads, cities and dams, stimulate economic growth by building facilities and industries, and making economic, medical and scientific advances using technology and modern equipment to accomplish this. Lastly, humans depend on their environments and essentially form mutually beneficial relationships with the land. Environment-based economic activities, such as agriculture, gardening and ranching, are prime examples of this type of human interaction with the environment.

3.2. Development of Geographic Possibilism

Arguably, the academic community is generally conservative when it comes to making changes in the basic methodology of a discipline. Well established ideas are difficult to dislodge. The change from *geographic determinism* to possibilism, outlined here in this section, is an example of a slight modification toward a more tenable position.

After *geographic determinism* received a lot of backlashing and critiques, most scholars have arguably tended to stress on the freedom of man to choose and consequently rise above all odds when given certain conditions and values. For them the pattern of human activity on the earth's surface is the result of the initiative and mobility of man operating within a frame of natural forces. Without denying the limits every environment sets to man's ambition, they emphasize the scope of man's action and ability to make choices rather than these limits.

Febvre has named this point of view "*Geographic Possibilism*" herein after referred to as *possibilism* and a very vigorous statement of its principles is to be found in his *Geographical Introduction to History*. The development of Possibilism is closely linked with the writings of

Vidal de la Blache and Brunches, Isaiah Bowman and Carl Sauer, just to mention but a few. Some account of the growth of this philosophy will be found in subsequent sections. Here only a statement of the main tenets will be dealt with.

In common with the determinists, the possibilist start with the concept of the terrestrial "whole", and the interrelation of all phenomena on the earth's surface. Brunches for example opines that:

> This (idea of relationship) must dominate every complete study of geographical facts. One cannot be content with the observation of a fact by itself or of an isolated series of facts. After this initial observation, it is important to place the series back in its natural setting, in the complex ensemble of facts in the midst of which it is connected with the series of facts which are its neighbours; we must ascertain in what measure it has determined them and in what measure on the other hand it has been affected by their influence.[79]

The geography of the whole is in the highest goal of those who interpret human – geography relationships from a possibilist perspective. The conception of the earth as a whole, whose parts are co-ordinated, where phenomena follow a definite sequence and obey general laws to which particular cases are related has been the backbone of this particular approach in understanding or explaining human geography relationships. The phenomena of human-geography relationships are related to this terrestrial unity by means of which alone can they be explained. They are related to the environment which is itself created by the combination of physical conditions in every part of the earth.[80]

In this terrestrial unity, the possibilists place a greater emphasis on the works of man as compared to the determinists. The works of man, not the earth and its influence, are the starting - point. This is strikingly brought out by comparing the form of Brunhes' book with that of Miss Ellen Churchill Semple's. Miss Semple's "simplified paraphrase" of Ratzel's

[79] Jean Brunches, *Human Geography: An Attempt at a Possitive Classification, Principles and Examples*, trans. I. C. LeCompte (London: George G. Harrap & Co Ltd, 1912). 14 -15.
[80] Paul. Vidal de la Blanche, *Principles of Human Geography*, trans. M. Bingham. (London: Constable 1926).

Anthropogeographie is devoted to the study of how area, location, mountains, climate, etc. affect man. Brunhes attempts to classify the essential facts of human-geography under three headings: facts of unproductive occupation of the soil (houses and roads); facts of plant and animal conquest (cultivation of plants and raising of animals); facts of destructive exploitation (plant and animal devastation, mineral exploitation).[81]

Geographical influences are Miss Semple's chief concern; they are to be sought out and expounded. Brunhes' interest is focused on the facts of human occupation of the earth, irrespective of whether they show environmental influences or not. In the second part of his book, where the link between the earth and man in examined, it is not influences that are sought out but "geographical relations between physical facts and human destinies".[82] His approach is certainly more conducive to unbiased research.

But not only are the works of man given more prominence, his activity is also stressed. Man, is not looked upon as a passive being, he is seen as an active force, reacting on his environment and changing it. The excepts below by Febvre and Vidal expound further on this line of argument;

> Man is a geographical agent and not the least. He everywhere contributes his share towards investing the physiognomy of the earth with those "changing expressions" which it is the special charge of geography to study. Through centuries and centuries, by his accumulated labours and the boldness and decision of his undertakings, he appears to us as one of the most powerful agents in the modification of terrestrial surfaces... And this action of man on his environment is the part which man plays in geography.[83]
>
> In this way, we are in a position to appreciate better the role which should be assigned to man as a geographical factor. He is at once both active and passive. For, according to the well-known phrase "natura non nisi parendo vincitur[84]

[81] Brunches. op. cit., 7
[82] Ibid., 25
[83] Febvre, op. cit., p.27
[84] Vidal de la Blanche, op. cit., 19

Human activity modifies both the inorganic and organic features of the earth.Man utilizes not only inorganic agencies in his work of transformation. He is not content merely to make use of the products of decomposition in the soil by ploughing, not to utilise the waterfalls, the force of gravity brought into play by inequalities of relief. He further collaborates with all living forces grouped together by environmental conditions. He joins in nature's game.[85]

Vidal de la Blanche returns to this point later and expands it as follows.

> Civilisation has appropriated its favourite crops. Their original habitats have been enlarged far beyond what could have been foreseen. From the original plant countless varieties have been perfected to suit the requirements of different climates, with the result that its importance is often greater in regions where it has been acclimatized, than in those where it originated. For instance, wheat does not today have the largest yield in regions where it was first cultivated; the harvests of Mediterranean countries cannot be compared with those of the plains of Central Europe. The largest ears of corn are no longer grown on tropical plateaux, but in the United States, on the prairies of the Middle West.

Bowman gives another illustration of this type of human activity.

> As knowledge of the world spread, the associations of event or condition with place widened, they become more complex, they had less or more significance with respect to mankind. The potato and maize plants were unknown to pre-Columbian Europe. Their discovery raised the question, 'Are they useful to the rest of humanity and where can they be grown?' The whole known world was in a sense resurveyed by the rough processes of trial and error and the result has been astounding. These two plants largely changed the economy of Europe. The soil had not changed; man had gained a little knowledge of it through a new plant. An element of one environment had been added to the elements, long fixed of many other environments.[86]

In this way man gradually replaces the variety of nature by uniformity. The action of man raised to the level of one of the powers of nature leads to the core of the possibilist philosophy, namely the contention that nature is not "mandatory but permissive."[87] Thus nature

[85] Ibid., 20
[86] Isaiah Bowman, and Rose B. Clark, *Geography in Relation to the Social Sciences* (1934). 36
[87] R. Hughes Olive J. Thomas & Whitbeck, *The Geographic Factor: Its Role in Life and Civilization* (New York: Kennikat Press, 1932). 12

is never more than an adviser.[88] The unrelenting power of natural agents reigns in the physical world alone. Human-geography relationships is a field of compromise; nothing is absolute or definitive for the human species on the earth except these general laws and those fundamental conditions which determine the limits beyond which all life is excluded; and if men are not able to push back indefinitely all these limits in altitude, latitude, depth, etc. they are at least able somewhat to force or modify some few of them.[89]

The forces of physical nature are bound to each other in their consequences, in their relations and in the consequences of these relations. Man, does not escape the common law, his activity is included in the network of terrestrial phenomena. But if human activity is thus circumscribed, it does not follow that it is fatally determined.[90]

The geographical elements of the environment are fixed only in the narrow and special sense of the word. The moment we give them human associations they are as changeful as humanity itself. ‘‘That is why modern geography has so definitely steered away from *determinism* and towards a study of types of actually working regional combinations of human and environmental conditions.’’[91]

Earth facts do not determine the form and nature of human society in development. They condition it. ‘‘New earth facts are continually being discovered and old earth facts given new significance as human knowledge thought and social action develop. The relations are reciprocal.’’[92]

These quotations, to which numerous others could be added from possibilist statements published during the last fifty years, make quite clear the contention that nature does not drive

[88] Vidal, op. cit, p. 321
[89] Brunches, op. cit., p. 607
[90] Ibid., p. 27.
[91] Bowman, op. cit., 37
[92] Ibid., 225

man along one particular road, but that it offers a number of opportunities from among which man is free to select. This number, however, is never unlimited, and environmental influence is definitely shown in this limitation. Possibilists do not, nor have they ever claimed, that man can free himself from all environmental influences. To attempt to refute possibilism by reiterating that, "You can't grow bananas at the Pole, nor pineapples in Greenland", as is sometimes done, is to ignore the real character of the possibilist study. Even Febvre, probably the most insistent on man's power of conscious choice, writes in this regard:

> Men can never entirely rid themselves whatever they do of the hold their enviroment has on them. Taking into consideration they utilize their geographical circumstances more or less according to what they are, and take advantage more or less completely of their geographical possibilities. But here as elsewhere there is no action of necessity.[93]

Brunhes strikes the same note:

> The power and means which man has at his disposal are limited and he meets in nature bounds which he cannot cross. Human activity can within certain limits vary its play and its movements; but it cannot do away with its environment, it can openly modify it, but it can never suppress it, and will always be conditioned by it.[94]

At times Brunhes' statements are couched in language closely similar to that of Determinist writers, as for instance when he says, "Those who seem to be most independent of local conditions and who escape the geographical imprisonment of our sedentary life .... the nomads, the shepherds, do not escape the tyranny of water". Vidal de la Blanche speaks of the "sovereign influence of environment" and says:

> Human societies, like those of the vegetable and animal world, are composed of different elements subject to the influence of environment. No one knows what winds brought them together, nor whence, nor when; but they are living side by side in a region which has gradually put its stamp upon them. Some societies have long been part of the environment, but others are in process of formation,

[93] Ibid., 315
[94] Isaiah Bowman, and Rose B. Clark, *Geography in Relation to the Social Sciences* (1934).

> continuing to recruit members and to be modified day by day. Upon such, in spite of all they can do, surrounding conditions leave their impress, and in Australia, at the Cape, or in America, these people are slowly becoming saturated with the influence of the regions where their destinies are to unfold. Are not the Boers one the most remarkable examples of adaptation?[95]

This final paragraph from Bowman states:

> While the 'physical laws' to which mankind responds are variable in their application and in degree of effect, yet this is also true that all men everywhere are affected to some degree by physical conditions. The drought of 1930 in the United States threw into strong relief the fact that it is only in regions of optimum climatic conditions that men may say 'I am free of those extreme conditions that have more nearly continuous effects upon man elsewhere'. How circumscribed are such optimum areas, and how much history, and what deep cultural relations have flowed out of the contrast between well-favoured and ill-favoured regions.[96]

The limits set by Nature to man's action vary from place to place on the earth's surface and from one historical period to another. In marginal environments, such as the hot and cold deserts, and at low stages of culture man's choice may be extremely restricted. In the more favourable areas of the warm and cool temperate zones, and in periods when man's techniques are highly developed the possibilities are more numerous. But however many skills man acquires he can never free himself from Nature's control. This is emphasized over and over again by Possibilists.

Thus, Brunhes writes:

> Thus, everything on the surface of the globe is for men a matter of habit, of sound understanding of physical facts, and of skillful adaptation to these facts. Moreover, the adaptation must take place promptly, and at the right time, preceded, prepared for, and brought about by exact scientific investigations. These investigations should also tend to moderate our ambitions and turn us away sometimes from undertakings that would mean such bold opposition to the forces of nature that men would run the risk of seeing sooner or later their

[95] Ibid., 18
[96] Ibid., 161

> patient work annihilated at a single stroke. The more imposing and glorious man's conquest, the more cruel the revenge of the thwarted physical facts.[97]

Great emphasis of this element in possibilist thought is necessary in view of the misunderstanding of some critics who appear to think a possibilist denies that environment influences man at will. What is important is to realise that recognition of the power of environmental influence is very different from an acceptance of the full determinist study. Carl Sauer has given this point masterly treatment in his papers on methodology.[98]

Conscious of the selective power exercised by man Possibilists are cautious in approaching the problem of environmental factors in history. Though Brunhes sees "human history deeply rooted in the material things of the earth" he does not believe that all history can be explained by geography. "History evolves upon the earth, but it is made up of complex and involved elements, that are removed as far as possible from elementary geographic conditions". He also asks if geographers are to be satisfied "with indicating some large and obvious relationships, exact though it be, between the general geographic situation of a country and its general historical destiny"[99], which is so obvious that anyone with an open mind can perceive it.

Yet if more precise investigation is to be undertaken it is an exceedingly delicate task. The search for causal relations is always hazardous unless there is a repetition of circumstances with identical results. But no two parts of the earth's surface are identical; each region presents a unique combination of physical and human features and therefore each region must be separately studied when the intricate interrelations of man and his environment are to be analysed. This is the raison d'etre of regional geography. Brunhes bases his work on studies of

[97] Jean Brunches, *Human Geography: An Attempt at a Possitive Classification, Principles and Examples*, trans. I. C. LeCompte (London: George G. Harrap & Co Ltd, 1912). 13
[98] Recent Developments in Cultural Geography, 1927
[99] Ibid,

island regions; Vidal de la Blanche, inspired by his teaching, the brilliant regional monographs of Demangeon (La Plaine Picardie), Blanchard (La Flandre), Vacher (Le Berry) and Gallois (Regions naturelles et noms de pays).

Precisely the same problem is met in history. Attempts continue to be made to distinguish cycles or patterns in history, and critics continue to point out that such cycles can only be established by an arbitrary selection of facts in each period; a different standpoint, resulting in a different selection, and the pattern is spoiled or another established. Each historical epoch is in fact a unique succession of events. This does not mean that causal relations or cycles cannot be found, it merely stresses the difficulties inherent in the search.

One factor stressed by Possibilists in the study of historical geography is the importance of habit. Man, is a creature in habit and habits once established become a part of his environment and exert considerable influence on his later development.

> Nature does not act on the needs of man (writes Febvre), it is man who by choosing two or three out of several means of satisfying his needs, and by clinging obstinately to what he has chosen, acts in the long run on nature, digs into it a trench, so to speak, always the same and in the same direction, of no great volume at first perhaps, but evergrowing deeper and wider. In other words what has to be brought out clearly is the manner of life of the various human societies.[100]

Habits, especially mental habits, modes of thought, long cherished ideas, may hamper man quite as seriously as deficiency in the physical environment. “Between the desires and needs of man and everything in nature that can be utilized by his beliefs, ideas and customs interpose. The origin of cultivation and of animal domestication is intimately bound up with religion and magic.[101]

[100] Op. cit., p. 239
[101] Febvre, p. 167

Ideas may even enclose a developing civilisation in man-created isolation.

> But there is also another isolation, one which man forges about himself by his own acts, by whatever structures he builds upon his own achievements. His feelings, prejudices, and all of his conceptions of social life are wrought into his inventions, into which he has put much of himself, and the modes of life which absorb his entire activity. To these may further he added a religious consecration through ancestor-worship and respect for a past which is shrouded in mystery. The result is that he weaves a thick shroud which envelops and paralyses him.[102]

In a most significant paragraph, Bowman refers to the part habits of thought play in precipitating crises in civilisation.

> It may be shown that there has never been a civilisation that declined because it exhausted the possibilities of the land. No nation ever declined because it exhausted the possibilities of the land. No nation has ever fully developed its 'frontier'. The earth has never gone back on man, but man has found himself entangled in 'the unpredictable effects of his system'. What really happens is that knowledge at the moment of strain, is not great enough to control the forces of nature and of systems of government combined.[103]

3.3. Applicability of Geographic Determinism in Athens

This section attempts an interpretation of the human-geography relationships of Athens from possibilistic perspective which suggests that some cultural reasons or causes could be used to explain the Athenians extraordinary achievements. These I shall refer to as human developmental values or cultural foundations. These cultural foundations are cultural universals that suggest which modes and standards of cognition and what values and practices account, at least in part, for human development. By cultural universals, I imply that the beliefs, values, and habits of thought that underlie the extraordinary achievements of the Athenians are embedded in all cultures, though they vary from culture to culture in their quality, magnitude, regularity, intensity, or convergence. I do examine the issues against the background of the

[102] Vidal, p. 237
[103] Bowman, op. cit., 42

correlations that exist between the Athenians and their environment from a possibilistic point of view.

3.3.1. The Colonization Movement

The archaeological discovery of the Greek trading post at Al Mina in Syria shows that intense trading activities took place between Greeks and Near Easterners including especially Phoenicians. About this time the Athenians were also exploring the western Mediterranean: Athenian traders appeared in the Bay of Naples, attracted by the iron deposits there; and by 650 the Greeks had become so indispensable in Egypt that the Pharaohs allowed them to build a trading enclave at Naucratis, only 10 miles from the royal capital. The absolute location of Athens, together with the geographic condition of the sea made these trading activities very lucrative.

Since culture and ideas often accompany the exchange of commodities, it is most likely that beyond economics there was mutual cultural benefit between the Athenians and the Near Easterners. At any rate, the economies of Athens grew through trade, though full and continuous material improvements in people's lives were slowed and, in certain respects, reversed for some time by high rates of population growth. As most of Greece was poor land and the nobility owned the best lands, increasing population meant that fixed allotments of marginal lands had to be cropped over and over or shared by an ever-increasing number of family members.

Life became so difficult for many ordinary people that, for the purpose of acquiring new lands, and to avoid a political backlash, several city-states of which Athens is no exception organised and transported some of their impoverished population to potentially resourceful

lands discovered during their trading enterprise and in their search for raw materials and markets. A successful 'colonial' settlement (*apoikia*), that is, home away from the original homeland, soon turned poor Greeks into rich landowners who became the wealth or ruling elite in the colonies where, as often, the population included natives and later Greek settlers.

These new lands, because they were either naturally endowed or situated near lucrative markets, were often better than the marginal lands at home. Consequently, they soon became sources of food and industrial raw materials or, at least, markets for the metropolitan economies. For example, dried and salted fish reached metropolitan city-states from or through the colonies of the southern shores of the Black Sea; ivory came from Africa; silphium, a medical plant which is also valuable as a condiment, came from Cyrene in Libya; incense and various spices were imported from the East; grain supplements came from Sicily, Italy, the Crimea, and possibly Egypt; gold was imported from Lydia, Egypt, Thasos and Thrace; silver came from the latter two, and from Spain, which was also rich in tin; copper was imported from Cyprus and iron came from Cyprus, Cilicia, and Etruria. To pay for these, the Athenians in the original homelands concentrated on products of which they had natural or comparative advantage: they exported large quantities of pottery, beautifully decorated for many purposes including usage as household wares; viticulture and olive orchards enabled them respectively to ship large quantities of wine and olive oil. But also, the production of non-traditional exportable goods like arms, textiles, and other industrial goods grew in large scale.

However, economic prosperity was not the only motive for the founding of colonies. Some saw an opportunity to escape from poverty, avoid the constraints of family or seek greener pastures. Colonisation also provided opportunities for some individuals unhappy with political life at home to escape in the hope of a better life in their new settlement. Rulers sometimes dispatched colonists with a view to solving social and political problems threatening the stability of the city-state.

The benefits of colonisation were many, but a few of the important ones may be mentioned. By reducing surplus population, colonisation helped relieve pressures within Athens. The agricultural, manufacturing and commercial sectors of the metropolitan and colonial economies enjoyed economies of scale, the material wellbeing of the people improving thereby in general terms. Colonisation also helped to spread Athenian culture abroad. Besides, contacts with foreign lands, particularly the Near East and Egypt, brought the Athenians new knowledge, which whetted their appetite for more. But also the Athenians learned the rudiments of mathematics and astronomy from the Egyptians and Babylonians; and from the Phoenicians they acquired the techniques of shipbuilding and navigation and, even more importantly, the alphabetic system and the art of writing, which substantially and more rapidly advanced their civilisation beyond preceding ones in the region. The alphabetic system, which uses only two dozen signs to represent all the possible sounds and statements in a language, made it much easier to democratise literacy and facilitate education.

3.3.2. Good Food and Good Water (They Were What They Ate)

It is almost certain that no one can achieve much whose brain is poorly nourished and poorly developed. Besides the genes, the food we eat and the water we drink are the most significant determinants of brain growth and development and, therefore, of one's physical and mental wellbeing. Food is good if it is nutritionally adequate in quantity and quality, whereby quality means the right balance of all the nutrients. Good water is not necessarily one that is chemically processed and flows from pipes, nor water that looks clean according to the eyes. Good, drinkable water is chemically determined: H_20 which, free from bacteria, is charged with acceptable limits of such minerals as magnesium, calcium, bicarbonate, sulphate, potassium, iron, and nitrate.

The diet of a people is determined as much by their physical environment as by their culture. Thus, tropical fruits are native to the tropics, yet they are generally not a regular dietary component in the meals of most sub-Saharan Africans. The Greeks lived in the Mediterranean zone, whose staple diets are nutritionally among the best in the world; they were also obsessed with spring water. The following account is intended to suggest that good food and good water should be taken as having contributed to the intellectual development of the Greeks.

The foods we eat contain substances called nutrients: proteins, vitamins, lipids, carbohydrates, and minerals. Nutrition refers to what these food substances do to our bodies. Because of the role water plays in the possibility and maintenance of life, nutritionists regard water also as food, indeed, as the best of nutrients and drinks, though it does not contain any protein or calories (the amount of energy in food). As water constitutes about sixty percent or more of the human body, neither life nor health is possible without it. Not only does water flush out poisons and wastes in our bodies, an adequate level of water in the body also enables nutrients to grow, repair, and maintain body cells; regulate body processes; and supply energy to the cells.

The Greeks believed that water, not water treated, as nowadays, with all kinds of chemicals, but fresh, bubbling spring water is medicinal. Where necessary they committed public expenditure to construct spring water in clay pipes from a distance of up to fifty miles, sometimes by tunnelling through the hills, as the Athenians did in the Mycenean times when a secret cistern was dug on the north-west of the Acropolis to ensure regular supply of water in the event of a besiege of the city.

The Greeks lived in the Mediterranean zone, which generates foods ranked as or among the most nutritive in the world. Thus, they adapted to the prevailing Mediterranean conditions and consumed the Mediterranean staples of cereal (wheat, barley), olive, and vine,

complemented by a variety of fruits (including grapes, figs, apples, pears, dates) and vegetables (such as legumes, cabbages, asparagus, carrots, radishes, cucumbers, pumpkins, chicory, celery, onions, garlic) which were grown in the area. They also consumed a variety of wild nuts (such as chestnuts, hazelnuts, walnuts, almonds), a modest amount of cheese, fish (fresh, dried, salted), and meat—mostly during their numerous religious festivals, which climaxed with the ritual slaughter of a large number of animals. Mackerel, sturgeon, tuna, sea bream, and mullet were delicacies imported from the Black Sea area. But the poorest Greeks ate plenty of vegetables and fruits, along with honey, the only sweetener, and olive oil, the only lipid. The only common beverages were water and wine made from grapevine; wine mixed with water was a staple in everyone's diet.

Wheat and barley were the main sources of energy for the Greeks. Cereals provided more than sixty percent of total energy for the Greeks while a low proportion of total energy came from lipids. Wheat and barley are also an adequate source of food energy: if we take minimum calories at 1,625-2,012 kcals per day and I kilogram of soft wheat as providing 3,330 kcals, the basic requirement could be satisfied by around 490-600gm of wheat or, at a high extraction rate, by about 650-800gm of wholemeal bread. Again, wheat and barley are not associated with any particular deficiency disease as are maize and white rice with pellagra and beriberi respectively. Moreover, they have a good proportion of most vital nutrients including the B and E vitamins, thiamin and niacin. Of course, wheat and barley are low in B2 (riboflavin) and deficient in vitamins A, C and D. But these nutrients were available in such plant foods as pulses, vegetables and fruits. Wheat and barley are higher in protein than most of the root crops to which many Africans are tied. Indeed, plant proteins are inferior to animal proteins. But the elite in Greece, who contributed most to Greek civilisation, had a more varied diet as well as access to meat of many kinds.

A strong connection between food and health has been observed since antiquity. Hippocrates around 400 BC could write thus: ‘‘Let your food be your medicine and your medicine be your food.’’[104] We now know to a significant degree the controlling role genes, water, food play in human development. It is important to note however, that it was basically the mild climatic conditions of the area of which the Athenians took advantage to cultivate wheat, barley and other kinds of vegetable and fruits in the lowland which provided adequate sources of energy to enable the Athenians to live in the rocky and mountainous region of Attica.

3.3.3. Keeping Fit

Keeping fit through training or exercises was an important feature of Greek culture. The Greeks fully appreciated the organic relationship between body and mind and how the proper maintenance and functioning of the body enables the mind to function optimally. The aphorism “a sound mind in a sound body”[105] has its origin in Greek culture. The value of physical exercise is impossible to estimate. Regular exercises generally improve one’s physical and mental health, indeed, one’s whole personality. But special exercises may be taken to attain several specific goals; for example, to induce good mood or reduce anxiety; to enable one work for long periods without feeling tired or sleepy; to improve appearance by toning and firming muscles or by getting rid of unsightly flab. This section tells in brief the story of the Greeks’ obsession with physical fitness and implies that physical fitness contributed to Greek intellectual creativity.

[104] Hippocrates, *Airs, Waters, Places*, trans. W. H. S. Jones (London: William Heinemann, 1923). 24

[105] This is the translation of the Latin phrase “mens sana incorpore sano” (a famous quotation by the pre-Socratic Greek philosopher Thales (Miletus, 624 – 546 BC), demonstrating the close links between physical exercise, mental equilibrium and the ability to enjoy life.)

3.3.4. Keeping Fit as Culture

Homer's *Iliad* and *Odyssey*, which reflect Greek culture in the late Dark Age, present the first written record of athletic contests that suggest that physical fitness was a common and an important part of Greek culture from prehistoric times. The *Iliad*, for example, shows that athletic contests; foot-racing, wrestling, javelin-throwing, boxing, and chariot-racing, formed part of funeral celebrations for the nobility, with valuable prizes awarded at the end of the contests. By 700 B.C keeping fit had become predominantly cultural; a way to live and a form of entertainment for many.

True, warfare remained a crucial activity in Greek life, so that martial prowess continued to be an important part of what it takes to fulfil one's public duties and one's desire for honour and influence. Thus, training for war continued. But now the reason for physical training in the gymnasia has gone beyond the need to prepare for war and to celebrate aristocratic funerals; it has also become a daily pastime: the youth and middle-aged Greek male would routinely spend the morning in the agora or workplace and the early afternoon in the gymnasium. Values such as unity, uniformity, regularity and symmetry ceased to be the exclusive properties of the phalanx; these values were now aspired to by men zealous to develop their personalities. Consequently, athletic training assumed an artistic form: to possess etiquette, skill, and grace instead of simple speed and strength became mandatory.

3. 4. The City-State as a Club

Today, there is one nation-state called Greece. By 600 BC the Greek world consisted of approximately 1,500 typically small, independent states scattered over the Mediterranean world and beyond. Since a state was basically a city or urban centre surrounded by satellite

towns and villages and countryside, the large number of cities or urban centres suggests that the Greeks were largely urbanised. As planners, architects, and social psychologists have recognised, the design of the built environment may affect behaviour in many ways. For example, the existence of several gymnasia in an area may result in many people engaging in regular exercises, and this behaviour can be expected to affect their physical fitness and sense of wellbeing. Taking advantage of the warm Mediterranean climate, the Athenians laid out their cities in a fashion that tended to produce a club effect on the citizens, namely, it induced intense socialisation and a stimulating and vigorous exchange of ideas; effects that in turn contributed to the intellectual development of the Greeks.

3. 5. Heroism

The developmental and creative potential of a culture partly depends on whether or how it inspires and rewards individual excellence. One way of verifying the promotion of such excellence is in society's conception of who is its best person or role model. The Greeks made a fetish of human excellences and tended to glorify and immortalise the hero, taken to be one who, indomitable in spirit, is competitively excellent in body and mind. This attitude resulted in a culture crowded with legendary role models, symbolising all kinds of human capacities and excellences that became historical targets of zealous aspiration and effort. One of the processes of transmitting the heroic ideal was by using poetic discourse: heroes' extraordinary deeds and temper were poetically or musically performed by inspired rhapsodists, as if to say that for education to be effective it must be pleasurable, and human beings genetically find music pleasurable. The effective transmission of the heroic ideal led to some of the greatest Greek achievements in body and mind.

In every society where it has evolved, literacy has been a cultural catalyst facilitating the qualitative evolution of civilisation. It is not a mere coincidence that the rate of literacy in all developed countries is over ninety per cent, whereas nearly all developing countries have very high illiteracy rates. Basically, literacy connects a literate to other minds and facilitates expository knowledge; it thereby tends to improve one's level of knowledge and, through that, one's habits of thinking and doing. And the school system is designed both to inform and to develop the analytic and constructive powers of the mind. The following account is limited to showing how literacy led to three significant cultural developments in human history, namely, formal education, the rule of law, and meaningful mass participation in democracy, in the case of Athens. (Relate the section to the geographical and climatic impact on the location of Athens)

CHAPTER FOUR

CONCLUSION AND REFLECTIONS

4.0. Introduction

This study provides an in-depth review of the prevailing paradox among *geographic determinism* and *possibilism* in relation to the Athenian human development. The work sees this gap and intends to bridge it. The determinists have strongly argued that the environment influences more human livelihood, health, culture, civilisation, politics, intelligence, religion etc. Therefore, human action is determined by physical environment. Whereas, the possibilists also clearly mention that things are changed by human decision and attitude. However, the writer claims that both factors are equally important for human development. Although the, possibilists believe that man cannot be entirely free from the influence of environment, but there is also a room for man to control his activities in the form of technology, attitude, habits, and values.

Thus, it is better to negotiate that both approaches state, like the early determinists, "man influences environment, just as the earth influences man."[106] This implies that both are interdependent on each other, and that we must not deny the *vis-a-vis* effects of both man and environment. Therefore, 'control', 'determine' and 'cause' must be replaced by 'influence' and 'influence' also be replaced by 'response' or 'adjustment' or 'adaptation'.

To conclude, the effect of environment on man is obvious and no one can deny it; but it is not the only factor that determines human development. The Chapter Two of this study argues that man is the complete slave of nature. This notion has consequently been disapproved

[106] E. Churchill Semple, "Classes of Geographic Influences," in *Influences of Geographic Environment* (New York: Henry Holt and Company, 1911). 41

by dynamism and science and technologies developed by man. For it would appear that no matter how human geographers argue, they would not negate the fact that man can be to a great extent free from the environmental influence, and that man is a master of his environment and not a complete slave of nature; although there could be the position that the environment can influence man and man the environment as well.

We need to note that Athens was quite similar to its rivals in terms of climate, location, geology, ethnicity, background history, and general culture. And although Athens did possess an extraordinary resource in the silver-bearing geological strata of southern Attica. But as Ober argues, environmental resource endowments in themselves, do not spur high performances; and that whether mineral resources are a blessing or not is a matter of knowledge organization.[107]

And again, as the economic historians Garvin Wright and Jesse Czelusta maintain and noted by Ober[108] what matters most for resource-based development is not the inherent character of the resources, but the nature of the learning process through which their economic potential is achieved.[109] This in fact, is what was not lacking in the case of the ancient Athenians. For as Ober rightly notes, without the cooperative decision following Themistocles' motion to manage the common pool resource of silver for public purposes, there would be no correlation between the presence of silver ore deposit in south Attica and enhanced Athenian state capacity. And as naturally happens, one an action has been planned and a decision made, the question is how to carry it, and implementing group decisions demands that individual efforts to be aligned to achieve the desired objective.

[107] Josiah Ober, *Democracy and Knowledge: Innovation and Learning in Classical Athens*, Princeton, 2008, p.72
[108] Ibid. p. 72
[109] Garvin Wright & Jesse Czelusta, "Exorcizing the Resource Curse: Minerals as Knowledge Industry, Past and Present." Working Paper, Department of Economics, Stanford University; 2002, pp. 02-008

It would appear, then, that in order to fit into their geographical location with its restricted natural resources, the Athenians developed the attitude of innovative experimentation and effective co-ordination or alignment of efforts and ideas to be able to meet the challenges of the conditions of the environment in which they lived, thus making Athens a knowledge-based and learning city in antiquity.[110]

4.1. The Applicability of Geographic Determinism and Possibilism

This study is premised on the general acceptance that the achievements of Athens indicate that they were very creative; consequently, it is worthwhile searching for the reasons for or causes of those achievements, to see how creative capacities can be produced sustainably for the development of higher civilisations. The argument of this study is that these reasons and causes are mostly and fundamentally cultural: they have to do with habits of thinking, and the kinds of beliefs and values held, though these were to an extent conditioned by the natural environment. Thus, the nutritious Mediterranean foods and the Athenians' preference for spring water in general, have contributed to the proper development and functioning of their brains.

Wealth resulting from enterprise generated leisure for a people who found overriding pleasure in the search for knowledge and in competitions in all kinds of human excellences. Widespread travel through trade because of their location close to the sea led them into contact with other peoples, especially Egyptians and Near Easterners, whose advanced civilisations broadened their outlook. The typical architectural layout of the city-state of Athens also promoted a steady sociological stimulation of the mind and induced a culture of argumentation and discussion. The Athenian love for physical fitness was considerably aided by routine

[110] Cf. Manville, Philip Brook, The Origins of Citizenship in Athens, Princeton, 1990, noted by Ober, p.106, n.56

preparations for war. Yet it grew independently of war needs and was constantly kept in view by the Greek belief that a sound mind can operate only in a sound body.

The physical conditions and their culture most probably contributed to the stimulation and structural development of their minds. But also their love for logically adequate explanations originally embedded in their prehistoric myths and refined through centuries of intense internal and international socialisation, imparted a vein of philosophical and scientific outlook and orientation to their thought processes. This vein grew into a logical and analytical disposition as literacy advanced and facilitated the deepening and enrichment of the cognitive habits of the Athenians. Higher levels of cognition promoted diverse intellectual creativity and a high degree of civic rationality, one of whose logical effects was the birth of a democracy grounded on liberty and equality, on the rule of law, and on the strictest accountability of public officials.

By embodying a competitive spirit in a society that glorified and immortalised excellence in body and mind, the Athenians were constantly motivated to desire; and aspired to the highest self-development. This desire for and pursuit of excellence was facilitated by a strong public appreciation of individual freedom and self-determination, tempered and sublimated by moderation and a creative sense of naturalism and objective truth. Finally, the Athenian city-state tended to promote leadership of the best people, those with proven competence, skill, experience and knowledge, with the overall consequence that, despite its location and initial settlement on the rock of the Acropolis with its few fertile lowland areas, and constant war, Athens experienced steady socio-cultural and political advancements.

4.2. Reflections

The reasons or causes underlying classical Greek civilisation in general, and Athens to be precise, point to one general conclusion: that how and what a people think significantly affect their rate or level of development. To see how far this could be true, we may take one of the basic foundations of all human societies, the economy. It is clear that the subsistence state of the economies of most developing societies such as those in Africa and Asia, is the result of a generally low cognition, which tends to inhibit productivity and the consequent accumulation of resources needed at the individual and societal levels for a sustainable pursuit of higher levels of life, including research and education. Also the low level of cognition in developing societies affects the diet of the people; hence, highly nutritive, ecologically given foods are neither cultivated in sufficient quantities nor actively promoted for consumption. A people mostly condemned by generally low-level cognition to struggle for survival on a daily basis, only an insignificant percentage of the population in most developing societies have the leisure and mental equipment to do significant or long term research or, generally, to aspire to higher intellectual activity. In view of the above, most developing societies are largely rural and tend to lack appropriate and adequate infrastructure and institutions that will contribute to the general stimulation of the mind despite the presence of the natural environment.

Moreover, most developing societies seem to lack strongly appealing values that constantly motivate individuals toward competitive excellence; values of self-development that serve as targets of aspiration from generation to generation. Further, in most developing societies the social mechanisms for vesting power are dominated by ascriptional criteria such as age, birth, social position or status, tribe, et cetera., rather or much more than by criteria based on proven competence, merit or intelligence.

There is, therefore, the need to significantly raise our general levels of cognition above its largely sensory, customary, instinctual, and metaphysical roots by means of properly designed curricula in our educational institutions that must be and must remain universal and compulsory at the basic levels. Such an educational project must be reinforced at all levels of society by institutional, infrastructural, dietary and other ancillary requirements; by motivating competitive pursuit of human developmental values, actively promoted by a system of institutional incentives and open, institutional opportunities for upward social and intellectual mobility, using the Athenian experience as our paradigm or model.

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