

A THEORETICAL APPROACH TO THE ECONOMY IN THE TRANSITION
FROM THE LATE BRONZE AGE TO THE IRON AGE IN CENTRAL
ANATOLIA

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ANATOLIA**

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ABSTRACT

A THEORETICAL APPROACH TO THE ECONOMY IN THE TRANSITION FROM THE LATE BRONZE AGE TO THE IRON AGE IN CENTRAL ANATOLIA

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This thesis is an attempt to understand the economic structure in Central Anatolia from the Late Bronze Age to the Iron Age. For this purpose, seven settlements located in Central Anatolia were selected. Gordion, Kerkenes, Kaman-Kalehöyük, Çadır Höyük, Boğazköy, Uşaklı Höyük, and Kınık Höyük will be evaluated, respectively. In order to achieve this goal, general social theories and some specific theories on ancient economy will be critically discussed. By doing this, the applicability of existing theories to the period and region selected here will be tested. Another goal of this thesis will be to understand the relationship between political organization and economic structure. Finally, this thesis will try and reveal possible economic relations between contemporary settlements that are in geographical proximity.

Keywords: Central Anatolia, political organization, ancient economies, Iron Age, production

ÖZ

ORTA ANADOLU'NUN GEÇ TUNÇ ÇAĞI'NDAN DEMİR ÇAĞI'NA GEÇİŞTEKİ EKONOMİK YAPISINA KURAMSAL BİR YAKLAŞIM

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Bu tez Orta Anadolu'nun Geç Tunç Çağı'ndan Demir Çağı'na kadar olan süreçteki ekonomik yapısını anlamaya yönelik bir girişimdir. Bu amaç doğrultusunda Orta Anadolu'da yer alan yedi yerleşim seçilmiştir. Geç Tunç Çağı'ndan Demir Çağı'na geçişte Orta Anadolu'nun ekonomik yapısını anlamak amacıyla sırasıyla Gordion, Kerkenes, Kaman-Kalehöyük, Çadır Höyük, Boğazköy, Uşaklı Höyük ve Kınık Höyük değerlendirilecektir. Bu amaca ulaşmak için genel sosyal teoriler ve antik çağ ekonomisine ilişkin bazı spesifik teoriler eleştirel bir şekilde tartışılacaktır. Böylelikle mevcut teorilerin bu tezde seçilen dönem ve bölgeye uygulanabilirliği test edilecektir. Bu tezin bir diğer amacı da politik organizasyon ile ekonomik yapı arasındaki ilişkiyi anlamak olacaktır. Son olarak bu tez, coğrafi olarak yakın olan çağdaş yerleşim birimleri arasındaki olası ekonomik ilişkileri ortaya koymaya çalışacaktır.

Anahtar Kelimeler: Orta Anadolu, politik organizasyon, antik ekonomiler, Demir Çağı, üretim

To my father...

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LIST OF ABBREVIATIONS

EBA: Early Bronze Age

MBA: Middle Bronze Age

LBA: Late Bronze Age

EIA: Early Iron Age

MIA: Middle Iron Age

LIA: Late Iron Age

B.C.E: Before Common Era

MP: Middle Phrygian

CHAPTER I

INTRODUCTION

This thesis attempts to understand Central Anatolia's economic structure from the end of the Late Bronze Age to the Iron Age. Geographically, Central Anatolia is surrounded by a series of mountains, Pontus to the north and the Taurus Mountains to the south. To the east of the region is the Anatolian Highlands. High ranges of mountains surrounding the region must have limited the region's communication with the surrounding lands in history. Although there are several rivers in the area along which flat plains are abundant, drought has always been an issue for the inhabitants through centuries. Despite this, the region witnessed rise and fall of many settlements in history. In this thesis, seven of these settlements (Gordion, Kerkenes, Kaman-Kalehöyük, Çadır Höyük, Boğazköy, Uşaklı Höyük, and Kınık Höyük) will be examined and their economic structure in the Late Bronze Age-Early Iron Ages will be discussed.

The chronological span from the end of the Late Bronze Age to the Iron Ages was selected to purpose since it represents a transitional period. The Hittites dominated Central Anatolia in the Late Bronze Age (1600-1200 B.C.E.). The hegemony of the Hittites in this period expanded beyond Anatolia, as far as Syria and beyond. The Hittites collapsed at the end of the LBA. It has been suggested that they collapsed due to events such as drought, invasion, and environmental catastrophes in the Late Bronze Age. With the disappearance of a solid political organization such as the Hittite State, the region entered a chaotic period, and a centralized political organization did not reemerge in the area for a long time. During this transitional period, which is called the Early Iron Age (1100-950 B.C.E.), the economic and social structure of Central Anatolia dramatically changed. Household-level economy was adopted, and people

turned to subsistence economy. Various migrations occurred from the west into the region. As a result of these migrations, the Phrygian Kingdom was established in the Middle Iron Age (10th - 7th B.C.E.) with a capital at Gordion and existed for a long time in Central Anatolia. In this period, some substantial economic changes were experienced in Central Anatolia, and production went beyond the household level again. It was a period in which there were significant increase in agricultural production, animal husbandry, and ceramic production. In the Late Iron Age (547-333 B.C.E.), the Achaemenid Empire ruled over Central Anatolia defeating the Iron Age kingdoms of Lydia and Phrygia. Under the imperial administration, as will be discussed especially under the Gordion section. The region entered economic and cultural relations with the rest of the Empire's lands.

In the context of this thesis, the political and economic structures of aforementioned seven sites will be discussed. The climatic and environmental conditions of these settlements will also be evaluated in line with the available data. This thesis also aims to reveal the relationship between climate, environmental conditions, and political organization.

The primary objective of the thesis had been to understand what kind of transformations in the scale, relations and capacity of production took place over time. Particular attention was paid to pottery production, as it could represent proposed transformations in production. How agricultural production and agricultural lands were transformed over time had also been a topic of the thesis. Changing habits in animal husbandry had also been investigated particularly to understand the changing practices the purpose and usage of raising animals.

The economy of the studied period will be examined with the help of theories on ancient economy. Our aim in doing so is to evaluate archaeological and historical data (written sources) such as written documents better with the help of relevant discourse. Although each theoretical approach is given separately in the thesis in fact, these theories are closely related. While none of these theories directly relate to the period

and region under examinations, they still offer essential perspectives for those who study past economies.

Each site under study was presented individually although they are in same geography. During this presentation no economic connection suggested. In general, the number of studies on Central Anatolia as a whole is very few. With the help of the theories discussed in this thesis, the region will be more thoroughly studied.

Finally, this thesis aims to understand the kind of relationship between political organization and economy at the chosen sites. The impact of the rise and fall of central authority on economy will be investigated especially with its role in the transition between household economy and centralized economic systems.

The readers will encounter the theories on ancient economies for the first time in the second chapter. They are separated into two main opposing camps: Substantivism/Primitivism on the one hand and Modernism/Formalism on the other two. These theories will be described in detail and their arguments regarding ancient economy will be presented. In the following pages, readers will find Polanyi, Weber, and Marx's arguments on pre-modern economies. Subsequently, contemporary theories and approaches will be introduced. Some of these are directly related to ancient economies, some are not, and they give only some insights into subject. The sections that follow introduce the settlements as case studies. The study indicated at the seven settlements have significant similarities in their economic transformations. The third chapter will explain the transformation from the Late Bronze to Iron Age in Central Anatolia. Subsequently, Central Anatolia's environmental and political conditions will also be introduced. After the downfall of the Hittites, the region entered a vacuum period in terms of political conditions. For a long time, there was no new state organization that would be a central power over Central Anatolia. After a long gap, the Phrygians established a firmly powerful state or statehood in Central Anatolia. The relationship between the political situations and archaeological materials in the process from the Late Bronze Age to the Iron Age in Gordion and Çadır Höyük, which was also examined in this thesis, was studied in detail by Krsmanovic (2017).

However, we will start by describing the ancient economies that exist differently from what Krsmanovic did. With the help of these theories, we will examine the political and economic structure of the studied period and region.

In the next sections seven settlements which were in the Central Anatolia will be described. Respectively, we are going to touch on Gordion, Kerkenes, Kaman-Kalehöyük, Çadır Höyük, Boğazköy, Uşaklı Höyük, and Kınık Höyük in Central Anatolia. Some of them give better evidence to observe the transformations in economic life. There are two reasons behind that. First, all settlements except for Kerkenes had been settled from Late Bronze Age to Iron Age; therefore, transformations can be observed. The other reason is archaeological excavations. For instance, Gordion and Boğazköy has been excavated for nearly a century, so the evidence and data from these sites are well documented. On the other hand, Kaman-Kalehöyük, Kerkenes, Çadır Höyük, Uşaklı Höyük, and Kınık Höyük's excavation history is not long as much as Gordion and Boğazköy. After the thesis will evaluate and discuss the available data with theories, the results will be presented.

CHAPTER II

ANCIENT ECONOMY THEORIES AND MODELS

Ancient economic history is still in its infancy, both because few economists have learned much about the ancient world and because ancient historians have typically not incorporated economics into their analysis. (Hirth, 2020, p.1 quoted from Temin 2006)

Before introducing ancient economy theories and models, we must explain some concepts used in this thesis to prevent confusion. The first is the concept of “*structure*.” This word is excessively used in social sciences. In Merriam-Webster dictionary, this word is described as “an organization of parts dominated by the general character of the whole and manner of construction”. On the other hand, “*structure*” has a more complex and deep meaning beyond the dictionary definition.

By structure, observers of social questions mean an organization, a coherent and fairly fixed series of relationships between realities and social masses. For us historians, a structure is of course a construct, an architecture, but over and above that it is a reality which time uses and abuses over long periods. Some structures, because of their long life, become stable elements for an infinite number of generations: they get in the way of history, hinder its flow, and in hindering it shape it. (Braudel, 1982, p.31)

So, the structure can be associated with objective conditions, constructed for long but very long times. This thesis will use the *longue durée* approach to understand the economic situation in Central Anatolia

In the following chapters, this concept will be introduced to readers; therefore, we will not mention it once more here in detail to prevent repetition. However, some thoughts may be introduced here to explain why we chose and adopted the *longue durée*. First, with the help of this notion, we may better observe transformations in the economic situation in a region because an economic situation is not stable, and it changes or is

changed by societies and natural conditions through time. This view may give some insights into our study. For example, why did people have a household-based subsistence economy at a particular time, and large-scale production at another time? What are the reasons behind such shifts? We can only grasp these by looking at the long past in the *longue durée*. However, we don't suggest here that human lived in a prison which is constructed by structure and *longue durée* as Braudel said.

For centuries, man has been a prisoner of climate, of vegetation, of the animal population, of a particular agriculture, of a whole slowly established balance from which he cannot escape without the risk of everything's being upset. Look at the position held by the movement of flocks in the lives of mountain people, the permanence of certain sectors of maritime life, rooted in the favorable conditions wrought by particular coastal configurations, look at the way the sites of cities endure, the persistence of routes and trade, and all the amazing fixity of the geographical setting of civilizations. (Braudel, 1982, p.31)

We use this notion because we want to observe the transformation of the economic structure, through time and through changes in politics.

Today, we live in a world where money, and profit, supercede, *auri sacra fames* come before social relations, family, friendship, religion, and statute. The ambition to make money forms and shapes nearly all social ties. Social relations and ethical concerns are less critical than profit-making. Today, humans alienated themselves from both their products and each other. When, how, and why have we come to this situation? History and archaeology may help in this inquiry by looking at the past to understand when, how, and why we came to this situation. Is the past different from today? What did the past look like if there was a difference between past and present? To understand the present, we must look at the past because the past determines the present.

Men make their own history, but they do not make it as they please; they do not make it under circumstances directly encountered, given, and transmitted from the past. The tradition of all the dead generations weights like a nightmare on the brain of the living. (Marx, 2008, p.10)

Therefore, studies about capitalism focused on study of the past. Because theories and approaches are influenced by contemporary socio-political phenomena they are. As Benedetto Croce said, all history is also contemporary history at the same time.

Economics of the past have been studied through several different theoretical approaches in accordance with the respective socio-political background of the observer, but also depending on the *zeitgeist*. There are only a few academic fields, where interpretation relies so heavily on ideology and the theoretical methods engaged, as economic studies of the past. (Jung & Gimatzidis, 2021, p.2)

Even though readings of the past are affected by the present, it is also possible to look at the self-attained dynamics of history.

In this chapter, we will try to evaluate ancient economic theories in order to later reflect upon our study group. We include the theories first because we think they will provide essential perspectives for our understanding of the economic structure of the period and geography to be examined. Based on these theories, archaeological finds and historical sources will be evaluated.

Firstly, economy as a term is considered as a concept peculiar to modern times. Although the concept is new, economic relations are as old as human history. Although, a market system similar to today was not dominating in the past, people's lives were impacted by a certain economic structure which had significantly effects on their social relations. The word "economics", Greek in origin, (*oikonomikos*) is made up of two words; *oikos*, a household, and the semantically complex root, *nem-*, here in its sense of "to regulate, administer, organize." (Finley, 1999, p.17) Origin of the word of "economics" is identified with householding. In literature, modern economy is associated with "an enormous conglomeration of interdependent markets" (Bradley, 1975, p.97) The word economy seems to have gained a wider meaning over time.

Studies about ancient economy are no longer trying to understand today's economy. They want just to understand economy in antiquity. Studies about Ancient Economy

firmly and relatively are a new field of study. Adam Smith, who was mentioned as founder of modern economy, was the first person who studied economy as a systematic way. Since his time, numerous academicians and researchers have tried to understand modern capitalist economy. However, very few of them looked at ancient time's economy. Also, existing ancient economy studies made on Greek and Roman history.

The debate over the ancient economy may have become sterile because of extensive reliance on, and over-working of, Graeco-Roman evidence from the classical period. Fresh life could be injected into the discussion... If we were to look more frequently at different historical periods. (Khurt,2005, p.3)

Studies or discussions on that topic are made on a biblical scale around two major views. The first one is primitivist/substantivism view and the second one is modernism/formalism. Anyone who wants to examine the economies of pre-modern societies must address these two views because the economic theories of ancient times were shaped around these two views. Although these two views have some common aspects, they can be considered complete opposites of each other regarding the ideas they advocate. Although they do not directly say anything about the period and region that will be examined in this thesis, the views they suggest contain eye-opening ideas for understanding all ancient economies. Therefore, we felt the need to utilize these two views to evaluate the archaeological material and understand the economic structure of the period and region to be examined in this thesis.

2.1. Primitivist/ Substantivist View

Substantivist and primitivist are two concepts which used interchangeably in ancient economic studies. The substantivist/primitivist view analyze how people make a living in their social and environmental areas. This view suggests that modern economy is different from ancient economies both in quality and quantity. Ancient economies have mostly based on agriculture, and trade was quite risky which made under demands of elites. People in ancient societies had subsistence economy, and productions did not go beyond the household level; therefore, their economic system was primitivist.

For those favoring the substantive view, the economy is embedded in the social systems where provisioning takes place. As a result, behaviors such as maximization, utility, and rational choice cannot be understood in the universal terms used by neoclassical economics because they are culture specific. (Hirth, 2020, p.4)

That is to say, we can't understand or penetrate economic structures and human behavior in ancient times by using modern concepts like market, rational choices, extensive trade networks, exchange values etc. because they did not have those concepts even though they had some kind of economic relationship. "No society could, naturally, live for any length of time unless it possessed an economy of some sort; but previously to our time no economy has ever existed that, even in principle, was controlled by markets." (Polanyi, 2001, p.45) In other words, ancient societies had no markets, and pre-industrial economies were quite different from modern capitalism. In this sense, they had primitivist or simple economies not complex. I make a direct quotation from Moses Finley (1999) to clarify better:

They (refer to Greeks and Latins) in fact lacked the concept of an "economy", and, a fortiori, that they lacked the conceptual elements which together constitute what we call "the economy". Of course, they farmed, traded, manufactured, mined, taxed, coined, deposited, and loaned money, made profits, or failed in their enterprises. And they discussed these activities in their talk and their writing. What they did not do, however, was to combine these particular activities conceptually into a unit, into "a differentiated sub-system of society. (1999, p.21)

Finley mentioned mostly about Greek and Roman in his book while talking about ancient economy, but it can apply to other ancient civilizations according to my view. Also in pre-historic times, the role or effect of status could dominate over like profit, money, and wealth because people should had scared to avoid being ostracized from society. The fear of social exclusion could prevent some economic relationship. In other words, economic relations embedded into social relations. Finley claimed that modern economic concepts are not used to understand the ancient world's economy because, at that time, there was no exchange value or market economy but instead use value. (Meikle, 1995, p.175)

Substantivist view claimed agriculture is predominant mode of production in antiquity; therefore, there is no or little interest in developing 'industrial-type production' which remained minimal and local. Also, towns and cities were thus net consumers and rather than landowning commercial activity remained in second plan. (Parkins & Smith, 2005, p.4 quoted from Hopkins 1983) Apart from Finley, Max Weber, who made great contribution to ancient economy studies, argue that in ancient Athenian economy, the role or effect of status could dominate over like profit, money, and wealth. His concern is mainly on the role of status, and ethic. Weber asserts that consumption needs came before production. Athenians mortgaged their lands not to build up savings but to bear the expenses of like marriage and death. Those economic activities depended on their concern of status. Mentality and social relations of time or spirit of time determine substantially economic relationship. (Morris, 1999, p.xvii.) When we look at Aristoteles who argued in his "Politica" that "there is no limit of earn money; therefore, this is not natural. Wealth should not be acquired as an end in itself, but for subsistence. But subsistence for householding is natural because of it has limitation." (Aristoteles, 1993, p.21) All in all, primitivism/substantive advocated that there was a self-sufficient household economy in ancient times and this situation is firmly different today's capitalist system. In this sense, the most crucial point is "the scales of economic activity" in both quantity and quality.

2.2 Karl Polanyi

Karl Polanyi was one of the most important figures in ancient economy thought and studies. Even though his arguments about ancient economy is close to the primitivism model, at some points become different. At first, "Polanyi against the primitivists at one point, he asserted that economic interests were subordinated to or absorbed within concerns with politics, honor and war and not because of the scale of economic activity." (Morris, 1999, p. xiii) Then he brings own thoughts into field. According to Polanyi, (2001)

Man's economy, as a rule, is submerged in his social relationships... Neither the process of production nor that of distribution of goods; but every single step in that process is geared to a number of social interests which eventually ensure that required step be taken. These interests will be very different in a small hunting or fishing community from those in a vast despotic society, but in either case the economic system will be run on non-economic grounds. (2001, p.48)

In Polanyi's thoughts social relations come before economic relations like profit, earn money or making a fortune, market. According to Morris (1999) Polanyi accepted that the profit could be strong motive in earlier societies, but that doesn't mean that profit was not an end in itself, it was just means to achieve to other ends. (1999, p. xii.)

He accepts that there were markets in antiquity, but it never had a predominant effect on social relations. This happened in sixteenth-century Europe and spread all over the world. Since then, economy have drawn away from the social relations and taken the form of disembodied economy. In other words, economy is determined by market, profit motives and capital accumulation not by status or social behavior and relations. On the other hand, non-capitalistic economies are organized around the exchange mechanisms of reciprocity and redistribution. According to Smith (2004) Polanyi claimed that true markets or prices (exchange values that rose and fell in response to changes in supply and demand) could not have been found in the ancient world instead there were equivalencies that were established by the king, and only the royal degree could change these. (2004, p.76)

2.3. Modernism/Formalism View

On the other side, there is modernism approach to ancient economies which is opposite of the substantivist view. This view has begun in the last quarter of the nineteenth century, which coincided with the beginning of marginalist or neo classical economies (Meikle, 1995, p.174) Economy emerged as an independent science with Adam Smith in the eighteenth century's. Smith claimed that provision of goods is a result of rational choices which are made by individuals who take time off their sources and for different ends. Humans are problem solvers, and they make choices which form or determine

their physical and social being. But the classical political economists did not seek to universalize political economy to cover all human history as modernists did it.

Cartledge said that for the formalist, the ancient economy was a functionally segregated and independently instituted sphere of activity with its own profit-maximizing, want-satisfying logic, and rationality, less 'developed' no doubt than any modern economy but nevertheless recognizably similar in kind. (Davies, 2005, p.229)

According to (Meikle 1995) Rostovtzeff, who is one of the most important ancient economic historians, there is a difference between the modern capitalist economy and the ancient one in terms of quantity, not quality, and some terms bourgeoisie, proletariat, capitalism, mass production, and factories may be used in describing the ancient world, which is frequently associated with modern capitalism. (1995, p.178) Rational *homo economicus* at the core of the neo-classical economy.

The neo-classical approach views the economy as a domain of human behavior concerned with material provisioning that can be studied separately from the rest of society. Material provisioning is based on rational choice theory where individuals make conscious choices about how to meet their needs and desires. (Hirth, 2020, p.3 quoted from Samuelson 1967)

This view is opposite of the substantive view in which economy cannot think differently from the rest of society. For Modernists, the ancient world could not be identified with a single stage of economic development which is based on the *oikos* (household) because there are many distinct periods and different regions in the ancient world. For example, there was extensive market exchange of slaves and other commodities which indicated a kind of capitalism. Those have substantial roles in the economic life of Greece and Rome at least in their classical periods. (Hindess, 2007, p.498-499)

2.4. Max Weber and Karl Marx: as Two Sides of the Same Coin

Anyone who studies in social sciences such as history, sociology and archaeology have heard and read Karl Marx and Max Weber's arguments. These two crucial figures have

still been substantially contributing to these fields even though they died many years ago. In this section, we will try to examine the views of Max Weber and Karl Marx on ancient economies. These two names attempted to understand capitalism's birth and examine its effects on modern society rather than directly looking at the ancient economies as in the Substantivist and Modernist views. However, for this purpose, they also discussed the ancient economies and expressed their differences with capitalism. Although, they both tried to understand how capitalism emerged, their approach was somewhat different. For example, Marx demonstrated how capitalism works, exploits humans, and alienates both production and people. On the other side, Weber tried to establish a connection between capitalism and Protestantism's rationalist ethic. However, while Marx and Weber were indicating those things, they looked and tried to understand historical societies and economies since according to them capitalism has firmly different characteristics compared to ancient economies. Even if there is a discrepancy between capitalism and pre-capitalist economies, they were aware that capitalism is also an historical issue, and it has its roots in the past. Our purpose here is not to focus on the birth of capitalism but to concentrate on Max Weber and Karl Marx who have substantial approaches and thoughts on how the ancient economies were.

The main reason for including these two names here is that while trying to understand the economy of the period and region to be examined in this thesis, we think that it will provide us with essential insights into understanding the economic structure of this period. Significant similarities can be observed between the views put forward by Max Weber and the Substantivist theory. On the other hand, even if Karl Marx is not included in any approach, his thoughts are influential. We will elaborate on their arguments.

2.5. Max Weber (1864-1920)

There is little or nothing which ancient history can teach us about our own social problems. A proletarian of today and a slave of Antiquity would have as little in common as do a European and a Chinese. Our problems and those of

Antiquity are entirely different. Therefore, the story I tell has only historical interest. (Weber, 1998, p. 391)

Clearly, Weber made a sharp distinction between the modern world and the ancient world, and he tried to understand ancient economies within their context. Similarly, we want to explore Central Anatolia's economy from Late Bronze to during Iron Age without falling into the mistake of applying theories on modern economy. In this book, "Protestant Ethic and The Spirit of Capitalism" Weber clearly expresses his thoughts about how pre-capitalist economies functioned, and why capitalism did not emerge before. Bang (2009) said that "Weber spent much of his career pursuing the question of why modern capitalism had failed to germinate in many civilizations even though they were no fewer complex societies than in early modern Europe". (2009, p.195) According to Weber (1998). Rationalist and systematic law, math, state, constitution and harmonical music existed only in the West, and were peculiar to it. The instinct of possession, profit and wealth were present in all times. On the other hand, modern capitalism is based on a rationalist capitalist enterprise and constant renewed profit. There were trade and merchants in ancient times, but trade was not sustained. There were *commenda* and insurance, but they were not rationalist and systematic. Most acts were irrational. Goods were acquired via wars, exploitation of victims and looting. All in all, it was based on brutal force. (Weber, 1998, p.7-21) Private commerce was not considered adequate to ensure provision. Dependence on imported grain in antiquity depended upon state intervention. (Weber, 1998, p.41) On the other hand, modern capitalism is based on free labor, which was not seen before, except a few examples. Weber claimed that contemporary capitalism could be possible under two essential conditions which are separation of domestic and work area and rationalist accountancy. However, before modern capitalism, property was owned by either the royal house or the *oikos* (household). Ethics and religion shaped behavior in the ancient world. In other words, there is a difference between modern and pre-modern in terms of quality. Carvalho said that Weber distinguished between the modern world dominated by rational and market capitalism and the ancient world, where political power exploited profit opportunities. There were some aspects of market capitalism in the ancient world but were not dominant. (Carvalho, 2018, p.491) There was

commerce in antiquity, but it cannot be compared in any way with modern one. Economy in the ancient world remained largely unaffected, and commerce could not develop very much. For example, for Weber, the Roman roads were used neither for trade nor a postal service. The roads were used by army. (Weber, 1998, p.392) Accordingly we may suggest that there was capitalism in ancient world, but it cannot be compared with our modern capitalism in terms of both quality and quantity.

2.6. Karl Marx (1818-1883)

Why should archaeologist use and study Marxism? One of the most simple and effective way answer the question is that because it offers archaeologists an intellectual tool kit that they can use to understand non-capitalist economies. (McGuire, 2021, p.29)

Karl Marx, undoubtedly, is one of or even the most influential thinker in humanities / social sciences. His thoughts were so effective and transformative that we are still debating them even after two hundred years. His thoughts contributed to many social sciences such as history, economy, and sociology as well as anthropology and literature. Here, for the purpose of this thesis, we will try to concentrate on Marx's thoughts about ancient economies as much as we can. Firstly, what is the content of history for him? Marx and Engels said that

The history of all hitherto existing society is the history of class struggles. Freeman and slave, patrician and plebeian, lord and serf, guild-master, and journeyman, in a word, oppressor and oppressed, stood in constant opposition to one another, carried on an uninterrupted, now hidden, now open fight, a fight that each time ended, either in a revolutionary re-constitution of society at large, or in the common ruin of the contending classes. (Marx & Engels, 1992, p.31)

Secondly, where is the history heading to? History, according to Marx, is heading to classless society; therefore, history's destination will be towards a communal society. Human sits at the center of his thoughts. Marx tried to observe changes in labor throughout history because labor results in production of objects and humans themselves. As a result of capitalism, people reach the highest point in alienation

towards their own production. According to Marx, a worker no longer sees the unfolding of his essential powers as the end of his own activity, but only the preservation and maintenance of his own existence. He now puts his life into action only to earn means of subsistence. (Marx, 2015, p.51) To the extent that the product ceases to be an extension of the individual, it no longer owes its origin to the satisfaction of the need for efficiency, but to the desire to own someone else's product, it ceases to be closely tied to its producer. (Marx, 2015, p.51) This alienation cause struggle of interest and the history progresses and breaks up due to class struggle such as struggle between peasants and feudals, proletariat and patron, slave, and master etc. In other words, this struggle is between classes who have means of production and people who have not. Each class struggles for own self-interest.

Complex relations between material conditions, consciousness, and social agency create classes and class fractions. Class analysis starts with real individuals, their actions, and the material (economic) conditions under which they live/lived, both the conditions that they inherited from the past and the conditions that they create/created through their actions. (McGuire, 2021, p.30)

Those interests include mainly economic things which, of course, cannot be separate from politics and society; therefore, economy and society (political economy) cannot be separate from each other in Marx's writings.

Marx believed that change must be understood in terms of historical materialism, the specific economic conditions that allowed the domination of one group (class) over another. Historical materialism never entails a simple reduction to economic factors because economic relations are structured socially and politically. (Earle and Spriggs 2015, p.517)

Why did people produce beyond their own needs at a certain time, and what were the causes behind that? Did environmental conditions cause such a situation, or did it arise because of the internal dynamics of the society, independent of environmental factors? For Marx, an individual is a social being, and his/her acts, thoughts, productions, and behaviors are affected by the society in which he/she lives. While Marx was trying to solve how capitalism works and how people alienate, he, at the same time, looked at ancient and prehistoric economic and political structures since everything up until today is historical. Needless to say, that there is no linearity from the past to the

present. History is full of contradictions and reciprocating actions. In the strictest sense, capitalism had emerged in West / Europe at first because people who live in those territories had lost their lands and they were emancipated from the feudal system; therefore, they were free to sell their labor as they please. They sold that free labor to people who had means of production like machines and factory. Before that time, labor was not free, and labor was attached to land, master, king or sultan etc. It differed from one place to another, but the basic relations of it was the same. The only thing which changes was its form.

Marx assumes that precapitalist societies differ from capitalist societies, because in pre-capitalist societies, the individual himself relates to the objective conditions of his labor as his ownership, setting up the natural unity of labor with its objective prerequisites. This unity is seen by Marx as a spontaneous relationship - natural - and its dissolution, which is only completed in capitalism, is a historic process, in which there is a transformation in the relations of individual with the community, and individualization, being the exchange one of the agents of this individualization. (Carvalho, 2018, p.489)

Individualization was not observed in pre-capitalist societies. In these societies, individual had existed together with the society. Marx and Engels claimed that individual as a member of society make nearly everything for the continuation of the community and as a member, he does not think to own property and make interest. Community is more important than individual, because of that, the individual is only a possessor, and the only thing is communal property. (Marx and Engels, 1977, p.22) Generally, one of the essential characteristics of capitalism is that it is based on limitless capital stock, which the owner of capital stock uses to invest. The aim of production in the modern world is wealth. As a result of that, an owner of capital may have wealth which is the absolute purpose of capital; on the other hand, Marx claimed that (even in Rome), the purpose of production is not wealth. The enquiry is always about what kind of property creates the best citizens. Wealth as an end in itself that appears only among a few trading peoples- monopolist of the carrying trade- who live in the pores of the ancient world like the Jews in medieval society. (Marx & Engels, 1977, p.31-32) For Marx, there was no unified economy in the ancient world because such a world consisted of diverse, multiple, and limited developments. People lived in the pores, interstices in the ancient world. (Carvalho, 2018, p.489)

To sum up, we may suggest some similarities between Max Weber and Karl Marx. Both figures agreed that those ancient economies differ significantly from modern capitalism in quality and quantity. Max Weber evaluated pre-capitalistic economies as irrational and unsystematic. For him, trade was firmly limited and too risky; therefore, it was not advanced. Karl Marx considered pre-capitalist economies in terms of production relationships. For Marx, there was no individual in the pre-capitalist societies. Production was made only for the community, not for the benefit of the individual. Of course, some people had means of production and had not. However, the purpose was not wealth as an end in itself as is in capitalism.

2.7. Political Economy

Societies have lived in a political system such as tribal, chiefdom, and feudalism; and societies enter certain economic relations within the political unit to which they belong; therefore, policy and economy cannot be separated from each other. Sometimes, the economy determined policy, and sometimes vice versa. Political economy has not only been used to evaluate present-day economies but has also been used to understand past social economies. In this section, we will focus on how the concept of political economy is used to understand past economies.

Political economy is defined as “the theory or study of the role of public policy in influencing the economic and social welfare of a political unit” in Merriam-Webster dictionary. On the other hand, Adam Smith asserts that political economy proposes two distinct objectives. One of them is to provide plentiful revenue or subsistence for the people, or more properly to enable them to provide such a revenue or subsistence for themselves. The second one is to supply the state or commonwealth with a revenue sufficient for the public services. (Smith, 1977, p.557) Marx defines political economy as the means of controlling wealth and creating inequality. (Vionis & Papantoniou, 2019, p.13) In the light of these interpretations, we may suggest that political economy relates with a state or politic unit, so there should be a central authority which would provide welfare to themselves or commoners. The rulers would control labor,

commerce, and production, and they would procure required materials for the community, as well as public services. From this inference, we may suggest that if there is no central authority or political unit such as a state, then there is no political economy.

“Politico-economy is a sector of the economy that extracts surplus from subsistence households and that is used to finance social, political, and religious institutions administered by non-food-producing personnel.” (Hirth, 1996, p.205 quoted from Johnson & Earle 1987)

Economy is not separated from political sphere which is directly attached to society and social relations. People enter into economic relations through their relations with others. Social relations may change from one period and territory to another one, and a person's behavior within economic activity is shaped by the society even though this situation may not be seen in capitalism. Since people seek just their own profit, so they are *homo economicus* not *politicus*.

Humans have been changing for million years and their relations with the environment and community in which they live in also changes. History and archaeology try to understand changes in time and space but the most important thing in this inquiry is time. Archaeology, different from history, has a chance to look deeper into time and see what has changed and not. The concept of political economy has been increasingly used (Smith 2004; Vionis & Papantoniou 2019; Morley 1998; Earle & Spriggs 2015; Stein 2005; Yoffee 1995; Hirth 1996; Schorman & Urban 2004; Frangipane 2018) in archaeology.

Archaeological political economy is not yet an integrated theoretical movement. Research emphasizing four themes: (a) a shift from models of states as highly centralized to notions of variability and limits of state power; (b) a focus on the economic organization of states; (c) research on rural areas and center-hinterland interactions; and (d) attention to interregional interaction at diverse spatial scales. (Smith, 2004, p.77)

The political power involves an ability to maneuver a group to act together in the leader's interest, which often conflict with the interest with other. the political economy in the past involved an economic structuring to channel resource flows (food, labor, wealth, and weapons) to finance power strategies. (Earle & Spriggs,2015, p.3)

In this sense, if someone wants to hold political power, he/she should take economic means of production in order to rule over commeners. For example, in Ancient Greece, the essential means of production was land, and the primary form of exploitation was unfree labor. (Croix, 2014, p.50) Whether this situation, which was valid in Ancient Greece, was valid in all ancient periods is a controversial issue. However, political power owns the means of production and has exploited and controlled the labor of those who lack these means.

2.8. Contemporary Approaches to Ancient Economies

In this section, we will introduce contemporary approaches to archaeology. The views put forward by these theories can give some insights into our understanding and transformations of the social and economic structure in Central Anatolia from the Late Bronze Age to the Iron Age.

2.9. New Archaeology (Processual) and Post-Processual Archaeology

Processual and Post-Processual Archaeology have neither substantives nor formalist thoughts about past economies. These two theories are more about how the past economies and societies can be perceived. That is, processual and post-processual archaeology examine not only economic situations but also many other things. Because of these features, these two approaches are grand theories in archeology.

New Archeology influenced archeology since its emergence and is an approach that emerged from within the archeology discipline itself, but of course, it was affected by both different fields other than archaeology like anthropology and sociology, and contemporary events. The term New Archaeology is given to a school of thought that swept through much of Anglo-American archaeology in the 1960s and early 1970s. It must be seen in the contexts of similar currents of thought in other disciplines – the New Geography and evolutionary anthropology. (Johnson, 2010, p.48) Binford argued that instead of viewing culture as a simple collection of shared values, which regulate

behavior within a society, we could look at culture as a means of human adaptation to both the natural and social environment.

... change in the total cultural system must be viewed in an adaptive context both social and environmental, not whimsically viewed as the result of “influences”, “stimuli”, or even “migrations” between and among geographically defined units. (Binford,1962, p.217)

This was certainly a new and different argument in archaeology discipline. For Binford, culture is humanity’s extrasomatic means of transformation. Humans have formed and shaped their cultures according to alterations in the natural environment, population pressure, and competition with adjacent cultural systems. (Trigger 2006: 94) Culture is the result of man's reaction to nature. Those sentences have a structuralist point of view and is environmentally deterministic. Binford gives little place to humans in forming culture and sees human behavior and culture as a reaction to the environment. To give an example, an environmental catastrophe will absolutely change existential economic relations, and situations. “...this theoretical stress on the importance of the external environment led to interest in cultural materialism (in which the material world is seen as more important than the mental world), cultural ecology, and modeling of the subsistence economy”. (Johnson,2010, p.53)

Post-Processual Archaeology has emerged as a reaction to Processual Archaeology's thoughts and approach to archaeology. This movement can back by 1980s.

Post-processual archaeology is not the result of a paradigm shift in the discipline... is not a coherent theory of the past of archaeology and is not a celebration of the individual set in a particular historical narrative, as opposed to the generalizing explanation of processual science. (Shanks, 2007, p.133)

Post-processual archaeology regarded culture as a source of variation in human beliefs and behavior. (Trigger, 2006, p.444) This view was affected by some philosophies like Marxism, and Frankfurt school that emphasized beliefs, and clashes of interest. They claimed that human beings are not passive objects that were molded by external factors. (Trigger, 2006, p.445) One of the most important of post-processual archaeology is about its contextual approach. Hodder (2003) said that “There is not

one meaning in the past. The same object can have different or conflicting meanings along different dimensions of variation and from different perspectives. (p.209)

However, this meaning, can also change from one archaeologist to another. It was claimed that when an archaeologist interprets things, he/she do that by assigning meanings to them. (Johnson, 2010, p.148) If interpretation change from archaeologist to another, also, the comment can vary from a *zeitgeist* to another.

So, the processual, and post-processual debate has centered upon the forms of knowledge appropriate to social science, how society may be conceived (reconciling both patterning or structure and individual action, intention, and agency), and upon the workings of the discipline of archaeology, its ideologies and cultural politics, its place in the (post)modern present”. (Shanks & Hodder, 1995, p.3)

To sum up, these two theories have different approaches to the understanding of past societies. New Archaeology claimed that structure, such as environmental conditions, was the main reason behind changes, and agency role was quite limited. People gave just reactions to alterations in structures. On the other hand, post-processual archaeology put agency to center. For it, individuals were not passive, but they were quite active in changes. There was no need for an alteration in environmental conditions to change, societies and cultures could trigger the changes as well as.

2.10. World System Analysis

World-system theory is an approach that attempts to investigate the dynamics of the “capitalist world economy” as a “total social system.” (Martinez Vela, 2001, p.1) Although it is associated with the capitalist world economy, it may be helpful to understand ancient economies; therefore, in this part, we will explain world system theory. World system theory has been a significant topic for many scholars from different disciplines. (Wallerstein 2004, 2011,2011: Frank and Gills 2003: Rowlands et al.,1987: Denmark et al., 2003)

A world-system is a social system, one that has boundaries, structures, member groups, rules of legitimation, and coherence. Its life is made up of the

conflicting forces which hold it together by tension and tear it apart as each group seeks eternally to remold it to its advantage. It has the characteristics of an organism; in that it has a lifespan over which its characteristics change in some respects and remain stable in others. One can define its structures as being at different times strong or weak in terms of the internal logic of its functioning.” (Wallerstein, 1974, p.347)

World-economy is integrated through the market rather than a political center. There is always a competition between the centers which prevent the domination of one center. Regions in this economy are interdependent for necessities like food, and fuel. (Martinez Vela, 2001, p.3 quoted on Goldfrank 2000) World-system analyses was affected by the Annales school’s *longue durée* concept which is long-term historical structures rather than short-term historical events. As Braudel did, world-system researchers try to look at long-term structures. Braudel will be dealt with in depth in the next chapters. In the World-system analyses, there are centers (developed states), periphery (undeveloped states) and semi-peripheries.

World-systems of two kinds -world economies and world-empires... Putting in the hyphen was intended to underline that we are talking not about systems, economies, empires of the (whole) world, but about systems, economies, empires that are a world (but quite possible, and indeed usually, not encompassing the entire globe). ... “world-systems” we are dealing with a spatial/temporal zone which cuts across many political and cultural units... The concept was initially applied primarily to the “modern world-system” which... takes the form of “world-economy (Wallerstein, 2004, p.17)

Centers are the areas that control more advanced technology and production processes, forms of labor organization, and strong state ideology to defend its interests. On the other hand, peripheries don’t have those attributes. They have been modified to meet external demands for raw materials. (Rowlands, 1987, p.4) International trade is not made by equals. Some centers(states) have more power than others; therefore, commerce is only made under conditions that surplus value must pass from weak territory to powerful. Wallerstein called this situation “unequal exchange” (Wallerstein, 2014, p.32) There are no political boundaries in this system, on the contrary, political units may take part in the system, and they are loosely connected to each other. Wallerstein suggested that “this system is the first world-economy can stand for long times, and it achieved this precisely by being thoroughly capitalist.”

(Wallerstein, 2014, p.41) For him, a politically non-unified world-economy could not have been founded in ancient times because necessary technology to maintain the increasing the flow of surplus could not have been developed. All in all, Wallerstein joins the ranks of “substantivist” with those interpretation. (Kohl, 2011, p.144-145) After Wallerstein propounded the world-systems theory in 1974, opposite views emerged. For example, Frank and Gills (2003) claimed that the world-system itself can go back further. It is a system that reach back at least 5.000 years. (p.41) The ancestor of modern capitalist system emerged, for the first time, in South Mesopotamia after the 3.000 B.C. E (Ekholm & Friedman, 2013, p.141)

There was precisely a kind of capitalism in ancient times and dynamics of that kind of systems shared many similarities with ours. For example, capital in antiquity, especially its accumulation in the form of gold and silver (monetary capital) is essentially the same as later capital, including modern time. (Ekholm & Friedman, 2013, p.140)

If Kohl (2011) made an analogy between Wallerstein and the substantivist view, we may make an analogy between modernist/formalist view, which advocated that the ancient economies are like modern economy in terms quality not quantity, and Frank, Gills, Ekholm and Friedman as well.

2.11. Commerce and Commercialization

Trade is defined as “the business of buying and selling or bartering commodities” in the Merriam-Webster dictionary. However, in reality, it has more and deeper meanings. Trade is in fact a highly loaded word for understanding social relations in the past, and archaeology studies trade relations extensively because a society can interact with one another in several ways such as wars, religion, trade, and search for new resources and lands, and trade probably is one of the most substantial ways for communication and interaction between two societies. Oka and Kusimba (2008) claimed that trade parallels political, religious, and social processes as one of the most significant factors to have affected our evolution. (2008, p.339)

Trade itself as the material-economic component of exchange and hence a necessary part of any social exchange... it as the material and ever-present aspect of exchange and analyze trading behavior with respect to exchange infrastructures, materials exchanged, and social relationships formed and renegotiated before, during, and after exchange. (Oka & Kusimba, 2008, p.340)

Trade as defined by Renfrew, consist of the “reciprocal traffic, exchange or movement of materials or goods through peaceful human agency”. (Kohl, 1975, p.45) So, according to Renfrew’s definition, it is the things that are traded.

As trade in archaeology has hitherto been studied primarily as the exchange of "things," as a dependent result of political and relational processes, the result of sociopolitical complexity, and as an afterthought of embedded exchange arising from social and political desires and motives. (Oka & Kusimba, 2008, p.341)

And meanings behind these things may change through commerce. Culture mentalities and even beliefs can be transmitted from one place to another with trading because commerce can only be made by people. Kohl suggested that “an economic subsystem is intimately associated with relations of production, which have always a social character. So, trade by its essential character should never be considered apart from the means and relations of production.” (Kohl, 1975, p.45) There are several defiant arguments about trade. No one denies that exchange and trade are substantial concepts for understanding one society’s economic structure. During excavations at site, a traded or foreign object could be detected by archaeologists because it most likely has different decoration, diameter, scale, and other characteristics that most other items. However, trade should be seen as more than just movement of objects from one place to another. It is essential is to understand when a society started trading, or why a society needed to trade, and to buy goods from elsewhere. If there was such a need, what were the conditions that create this need? Did it arise from the demands of the elite or ruling class, or simply as a result of the primary needs of the people? In our humble opinion, the answers to these questions have a key role in understanding the economic structure of a society, settlement, and state in the past. For example, if trade covers only luxury goods, we can say that it emerged in line with the demands of elite or dominant powers, that is, there is a political power and a class that forces people to trade by using this political power. If it emerged only in line with the needs of the people, such as food and clothing, the existing economic structure gains a different

meaning. We have touched on trade separately here because we think that trade plays a key role in understanding the economic structure of the period we are examining.

The dictionary definition of commercialization is “the organization of something in a way intended to make a profit.”

It is a synthetic concept that includes several related aspects of economic process: a) price making market allocates commodities and factors of production b) prominence of entrepreneurial activity c) the pervasiveness of some intuitions like money, marketplaces, credit and banking (Smith, 2004, p.79)

Those states are very similar to modern states with capitalist systems. However, according to me, we don't have to see all of the above elements in ancient times, yet commercialization could have still existed at some ancient states and these examples need not be the same as modern capitalism. For example, we know that there were some entrepreneurial activities in Assyrian trade colonies (Veenhof,1977, 1997,2001,2010: Larsen, 1967), and some rich or noble families invested their capital stock in merchants to make profit.

2.12. The Concept of Household as a Self-Subsistence Economic System

Although social reproduction is shaped by broad social structures, long-term historical processes, it could never be accomplished without small-scale agency... Household agency also actively affects wider social structures through changing social relationships and variations in the degrees of integration within that structure. (Souvatzi, 2012, p.17)

We include the household concept in this section because we will encounter this concept many times in the following chapters. The concept of household is defined in Merriam-Webster dictionary “as those who dwell under the same roof and compose a family, or a social unit composed of those living together in the same dwelling”. The household expresses a different meaning than family. Family is based on kinship while a household may include unrelated individuals. (Rainville, 2012, p.142) Souvatzi (2012) claimed that the household is a social group which cooperates in some fields such as social, economic, and ideological realms. At households, production, distribution, and consumption etc. remain minimal. (p.18) In this sense, family is

defined via kinship relationship. It does not matter where the individual resided. On the other hand, the household is viewed as a task oriented residential unit. There could be both kinsmen and non-kinsmen. (Hirth, 2020, p.18) In this sense, the household's economy should be small scale. People gather across a household to meet basic needs such as food, housing, and clothing. There is a domestic mode of production, and each household is ideally self-sufficient, and producing all that it needs. (Hirth, 2020, p.18 quoted from Johnson and Earle 1987)

2.13. Studies on the Mediterranean

Emperor Hadrian might tour from one end of the Mediterranean basin to the other and have similar philosophical conversations, drink similar wines, and eat off similar gold plates at every stop, while for 99 per cent of its people the 'Mediterranean world' was just a few hours' walk across. (Crielaard, 2021, p.184 quoted from Morris,2003: 30–31, 37–38).

The Mediterranean Basin is a unique geography for those who lived there and historians who wrote its history. She has been a major topic of interest for many historians. (Braudel 1989; Broodbank 2013; Horden & Purcell 2000) and archaeologists who deal with societies across the region. This interest reached its peak with Fernand Braudel. Although the area that we will examine in this thesis is perhaps outside the Mediterranean, its economic history is considered necessary for our thesis. If a survey is done among historians about the most influential historian in the twenty century. Fernand Braudel will probably be the first.

Braudel has shaped historiography since his influential book "The Mediterranean and Mediterranean World in the Age of Philip II" was published. In the introduction of this book, he separated historical time into three sections. First is the role of the environment, which is the almost timeless history of the relationship which imply man's relations with the environment that surrounds him. The second one is the collective destinies and general trends. The third one is the most traditional, which is the swift change of events, politics, and people (Braudel, 1989, p. XVIII). "All three operate contemporaneously but at different wavelengths in time." (Bintliff, 1991,

p.6) And then he said that events are like lightning bugs in a night; they give light, but which does not brighten the night. Of course, Fernand Braudel is not alone in his journey; there are others such as Lucien Febvre and Marc Bloch in the Annales School. But the *longue durée* concept was introduced by Braudel. How can we benefit from this concept in our investigation? Using the idea of *long durée* in Braudel's book has advantages and disadvantages. As a disadvantage, he gave no place for human action or limited human activity. There is an acceptance of geographical determinism and less importance to social structures. On the other hand, with the *long durée* perspective, significant pattern changes in a region like Bintliff (1997; 1999) did in Boeotia (Greece) can be observed.

We live in a world where, every day, even every hour, a new event appears that determines almost every person's life in the farthest corner of the world. Even though we watch and read the smallest detail of an event on TV., in newspapers, and on the internet, we can't still know the entire event. Considering this situation will be a formidable task even though it will be impossible to grip the past with all aspects since there was so little evidence from it. However, we may have an alternative way to understand what past lives looked like, and this opportunity is related to Braudel's first two entries. Throughout human destiny and life have been determined by the environment and people's influence had few instruments to change it. The setting determines and changes weather, land, water resources, vegetation, and even a person's skin, resulting in people deciding what to produce and what not to produce according to environmental conditions. Marx (2008) said that "Men make their own history, but they do not make it as they please; they do not make it under the circumstances directly encountered, given, and transmitted from the past." (p.10)

In other words, man performs his action within the objective conditions present before his existence and encountered after he came into the world. However, that does not mean that structural, environmental, or objective conditions entirely determine human action. As the subject of history, there can be actions against the structure, against changing and transforming it. Considering all this, although what Braudel says about the Mediterranean sees structural conditions as the primary determining factor, there

are essential things that we can benefit from it. Understanding the importance of structural elements, a necessary part of societies' economic and social life can be revealed. If we can constitute environmental conditions like climate, the shape of soil, water resources, etc., of an era under study, we can indicate patterns and behaviors behind the human act. Why did a person grow barley rather than corn within his agriculture zone? Why did they make an adobe house rather than a wood or stone house? After analyzing the environmental conditions, we may investigate the social history of economy, states, and societies that would be an endeavor intended for the *zeitgeist* of the period under the study. From an archaeological and historical perspective, such a task can be reached through land-use practice, mode of production, state regime, etc. Of course, to do this, we need data. The environmental conditions, if any, of the studied settlements will be included in the thesis. If not, we'll have to wait for future work. For example, a political organization may change the environment.

Decreased erosion occurred during increasingly centralized management of land use associated with the Hittite Period, Phrygian Period, and Roman Period in Gordion. Centralized economic and political control of the rural landscape should favor efficient land use in exploiting the most productive agricultural resources. Less resilient sectors of the landscape would be used less. (Marsh & Kealhofer, 2014, p.10)

Before moving on to the area we will examine, it would be helpful to look at another critical study on the Mediterranean other than Braudel. This study is the work of Peregrine Horden and Nicholas Purcell in their book "The Corruption Sea: A Study Mediterranean History (2000)". The book is a great study of the Mediterranean, based on nearly three thousand sources. In our opinion, what this book reveals are that it presents a unique example of interdisciplinary work. It indicated the interaction between environmental factors and societies and economies.

Other sources of inspiration for this interconnectivity paradigm (Horden and Purcell's *The Corruption Sea*) are today's network society, the current internet culture and information society, and such related phenomena as globalization and increased economic interdependence. (Crielaard, 2021, p.183)

Of course, this doesn't mean that historians and archaeologists invent the past. There is no invention, but there is historiography, and each tries to grasp only one aspect of history. When we do this, we cannot escape from our time's events; therefore, Horden and Purcell couldn't escape it. Suppose we want to come back to our topics. In that case, the book is not a work of environmental history of the Mediterranean, but instead, the book is about ecologically sensitive social and economic history. (McNeil, 2001, p.645) The Mediterranean region and the book's time scale cover almost three thousand years of history, from the earliest historical times to the late twentieth century. (Molho, 2002, p.487) The book tries indicate a synthesis of ecological history of the Mediterranean is the interplay or tension between the fragmentation of topography into a geography of micro-regions, on the one hand, and the connectivity among those regions that the sea provides." (Glick, 2002, p.555) It suggests that fundamentals affected the Mediterranean economic and social situation. The first one is the extreme fragmentation of Mediterranean land. Many micro-regions are continually re-shaped by human agency. The second one is about the uncertainty, which could be about the force of the wind, the amount of rain, and volcanic catastrophe. The final one is about the Mediterranean itself. The central sea enables people to link the fragments, ease of communication, and mobility. (Broodbank, 2013, p. 22)

It is the relatively high degree of differentiation between micro-regions and the "natural" human response to risks caused by the marginality of the Mediterranean environments that forces these regions to continually interact, creating interdependent relationships and networks that foster cultural homogeneity across ecological divides.
(Crielaard, 2021, p.187)

Horden and Purcell's work on the Mediterranean may give insights into understanding Central Anatolia's economic situations from the Late Bronze during the Iron Ages because their works emphasize neither environment nor a human agency. It would seem that there is a mutual relationship between climate and human agency. People are not passive in forming and determining their economies.

2.14. Discussion

We mentioned different arguments, views, or approaches about ancient economies. While doing that, we tried as much as possible not to favor one view over the other. While some of the theories, as mentioned earlier and models, were aimed directly at understanding ancient times' economies, some implicitly implied. The common feature of all is that they examine the past as a whole. In other words, according to them ancient societies either had a self-sufficient economy based on a household economy or had a developed and complex economic structure reminiscent of today's capitalism. Any theorist cannot expect to examine every period of history in detail and put forward a generally accepted theory because everything that happens under the sun is related to history. In other words, the lifetime of no historian or archaeologist is sufficient for such a study. What these theories show us is a pattern. They're just models to help us understand past economies. Being aware of this, we included these theories in our thesis because they made predictions about the economic structure of the period and the geography to be examined in this thesis.

Firstly, the Substantivist view was evaluated. It supposed that the ancient economies had lack of conceptual elements that constituted economy. Ancient economies are different both in quality and quantity from capitalism. Secondly, modernism was evaluated is opposite of substantivism. It supposed that the ancient economies are similar in terms of quality not quantity. These two theories focused mostly on Greek and Roman periods, but their arguments can be implemented to other pre-historic economies. Although Substantivist and Modernist theories used anthropology in addition to historical sources, archaeology was scarcely included. Generalizations dominate these theories; therefore, they may not be relevant to every period and geography. Nonetheless, they can still contribute to our understanding of past societies' economies.

In addition to the Substantivist and Modernist theories, we also talked about the thoughts of Max Weber and Karl Marx, respectively, about how the ancient economies could have been. Max Weber thoughts are parallel to the ideas advocated by the

Substantivist view. Weber considered the economies of pre-capitalist societies as primitive and undeveloped and argued that these societies were irrational and unsystematic. Although Karl Marx accepted that the pre-capitalist social economies were not very developed, his theory is quite broad. Marx generally says that history is a history of class conflict and states that societies were divided into various classes in periods other than primitive communal societies (classless societies). The class, which owns the means of production, constitutes the stratum with a high level of economic prosperity in society. It can be instrumental in consulting Marx's views to understand why people produced beyond their needs at a different period. Apart from this, it is essential to include Marx's ideas to understand how the tremendous, monumental architectures, fortifications, and expanded agricultural lands came into existence in certain periods. Marx's ideas can give insights into understanding how political apparatus managed the social workforce, manipulated people, and exploited or used their labor.

New-Archaeology and Post-processual archaeology can be evaluated as tool kits to understand agency-structure relationship in a society. These two approaches can be evaluated in terms of understanding why the existing economic structures in a particular period have changed and, even more generally, why, and how past societies have changed. We have included these two theories to understand what reasons (agency vs structure) were behind changing in economic situations agency. Lastly, we focused on world-systems theory and some work on the ancient Mediterranean. The World-systems theory is an attempt to understand modern capitalism. For Wallerstein, this theory is not intended for the economies of pre-capitalist societies and, therefore, cannot be used for ancient times. However, the perspectives presented by this theory have been used to understand the economies of ancient times. We include this theory in this thesis because we think it can contribute to understanding the economic structure of the period and region we are examining. In ancient times, some centers may have been technologically, militarily, politically, and economically more robust than other settlements and may have provided raw materials and human resources from weaker regions. If the resources are believed have to flows from the periphery to the center, World-systems theory could be useful a better understanding. Other studies are

the contributions of Braudel, Horden, and Purcell to an understand of the Mediterranean. The view put forward by Horden and Purcell has been quite influential. This study is critical in considering the studied region in many aspects, such as climate, the role of humans, and geographical and topographical situations between settlements. Although the studies on the Mediterranean differ from the period and time that will be examined in this thesis, these studies are included to understand the relationship between geography (environmental factors) and humans.

CHAPTER III

TRANSITION FROM THE LATE BRONZE AGE TO IRON AGE IN ANATOLIA

And I wish that I were not any part of the fifth generation of men, but had died before it came, or been born afterward. For here now is the age of iron. Never by daytime will there be an end to hard work and pain, nor in the night to weariness, when the gods will send anxieties to trouble us. (Muhly et al., 1985, p.67 from "The Work and Days")

"In the beginning, was the word". John's Gospel begins with such a deep and beautiful sentence. John claimed that the word, the God's word triggers everything, and it has been given a life to all creatures by him. Everything became through with God, and nothing became without it. (John.1:4) In that sense, human's act is nothing and precisely because of that, Goethe reacted to this sentence and said, " In the beginning was the act." (Goethe, 1983, p.67) Act of human triggered the movement and the act of human has been changing the world since the beginning. What kind of an act caused such a change, transformation, and process? How did human change both environment and their own life? Of course, such questions could be multiplied but we must stop at one point to prevent speculations. For a long time, humans used stone and bone to form, change, and promote. (Childe, 1951, p.45) After a while, however, they learned using metals in production. Respectively, copper, bronze and iron were used for different purposes. (Childe, 1985, p.31) Metal tools became an important assistant to build civilizations containing irrigation canals, agriculture, fortification walls, dwellings, and palaces, etc. With the help of metal tools, agricultural production increased, and surplus production enabled interaction between civilizations. We can see such a network or contact as early as in Bronze Age. In that time, Hittites, in Central Anatolia, Egypt, Mycenaean, Troy, Assyrian and Hurrians established a great network among themselves. For example, writing was brought by Assyrians to

Anatolia because of such a network. Also, copper and tin which are necessary things to make a bronze, brought together by long-distance shipment. (Sagona & Zimansky, 2009, p.292) Tin came from Afghanistan to Near East and Anatolia and it was mixed with copper which was ample through Anatolia. Even a city's name (Diyarbakır) in Turkey came from copper. Written evidence and archaeological assemblages confirm that there was close interaction between those regions.

The Bronze Age long-distance network pervaded a vast area from Central Asia to the Eastern Mediterranean, including the Indus Valley and South Arabia. (Altaweel & Squitieri, 2018, p.163) However, these connections were broken up and the connection was interrupted.

Throughout the eastern Mediterranean the twelfth century B.C.E ushered in a dark age, which in Greece and Anatolia was not to lift for more than four hundred years. Altogether the end of the Bronze Age was arguably the worst disaster in ancient history, even more calamitous than the collapse of the western Roman Empire. (Drews, 1993, p.3)

Even though there were colossal destructions in the Aegean and Eastern Mediterranean regions at the end of the thirteenth and the beginning of the twelfth century BC, it is suspicious who—or what—was responsible (Cline, 2020, p.137) Although there is no clear evidence behind these massive destructions, some arguments have been propounded. Concerning the causes underpinning the Late Bronze Age crisis, it has been argued that several factors may cause destruction. (Ward & Joukowsky, 1992) For example, technological innovations in warfare, droughts leading to chaos and internal struggles may have been among of the causes behind this destruction across East Mediterranean; also, written evidence which came from Turkey, Syria and Egypt overlap with those arguments. (Kaniewski et al, 2018, p.2288)

It may have been this very internationalism that contributed to the apocalyptic disaster that ended the Bronze Age. The cultures of the Near East, Egypt, and Greece seem to have been so intertwined and interdependent by 1177 BC that the fall of one ultimately brought down the others, as, one after another, the flourishing civilizations were destroyed by acts of man or nature, or a lethal combination of both. (Cline, 2020, p.171)

Concepts like invasions, massive migrations, destructions, wars, economic and political disruptions, etc. may be used to identify the Late Bronze Age. A new age,

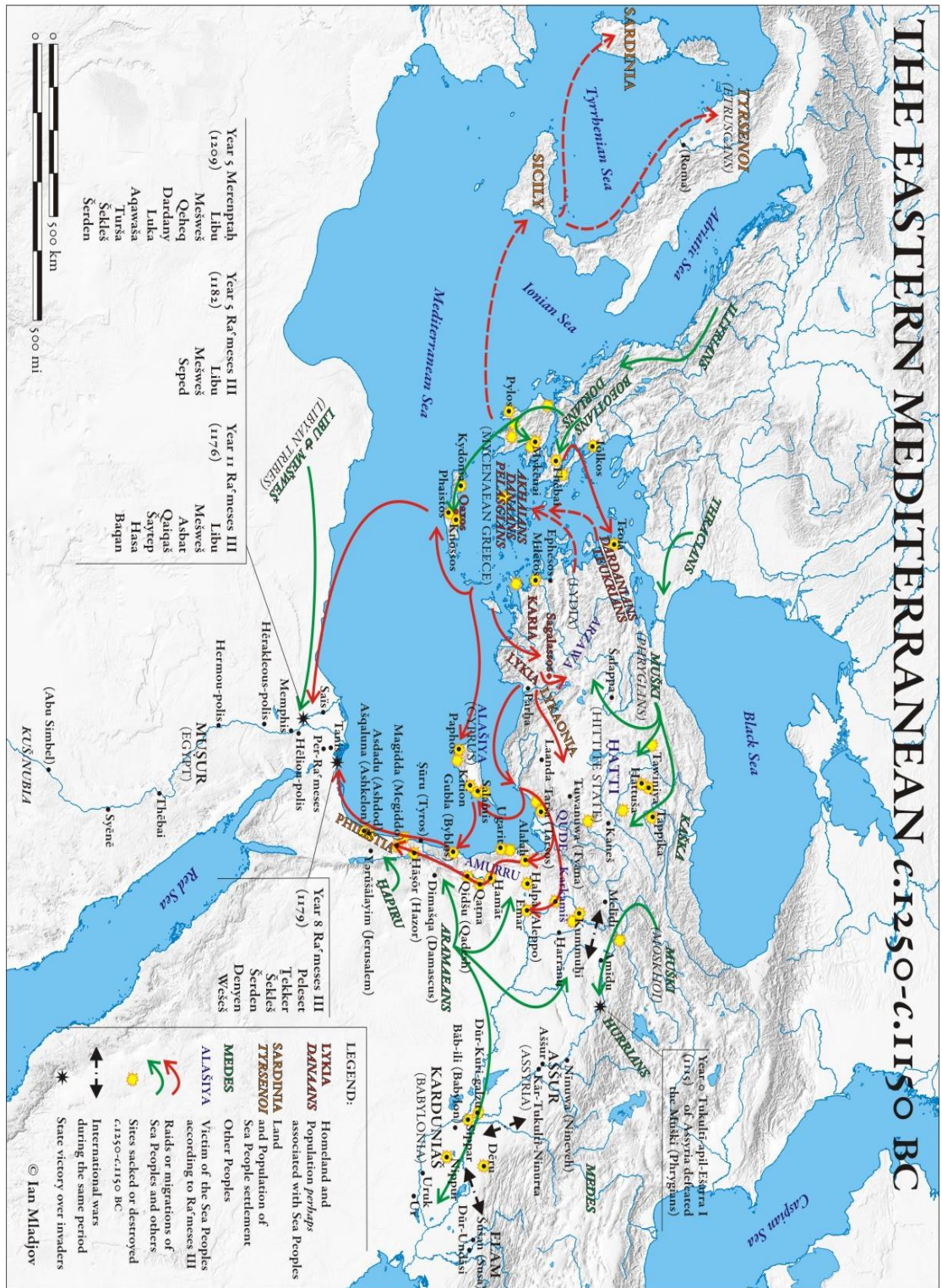
again, would rise from the east. With the rising of the new age, some things would be forgotten, but some would continue.

Because a civilization means a continuity when a civilization changes, it continues living, and it intimidates old values constitutive of its essence. Cultures are not mortal. They resist various disasters and rise from the ashes when needed. Even when they are burned and devastated, they are reborn. (Braudel, 1990, p.58)

We will try to investigate what was forgotten and what continued in Anatolia during the Iron Age, but first we must look at the political situation before the catastrophe. Undoubtedly, the Hittites were the most significant and dominant power in Anatolia until its collapse. Its lands stretched from Troy to Northern Syria, from Pontus to the Taurus Mountains.

“The Hittites managed to unify a substantial part of Anatolia (more or less) for 500 years in the face of local dynasts, invading tribesmen, competing empires like Arzawa, Egypt, Mittanni, and Assyria must rank as a remarkable achievement.” (Beal, 2011, p.597) History shows us that when a great hegemony lost its power, there would be vacancy and economic and political disruption after the fall of a powerful state until a new one rose. On the other hand, even when civilization collapses economically and politically, its legacy like culture, language, regime, etc. can continue its reign. Its heritage can live in social memory. Sagona & Zimansky (2009) claimed that Neo-Hittite principalities located in Northern Syria used some Hittite state symbols in their monuments. However, they adapted them to their own style rather than copying them exactly. Also, the increasing using of hieroglyphic writing in the Iron Age may could be seen as both continuity and discontinuity with the Hittites. (Sagona & Zimansky 2009, p.294)

Figure 1 The Eastern Mediterranean c.1250-c.1150 B.C.E.)



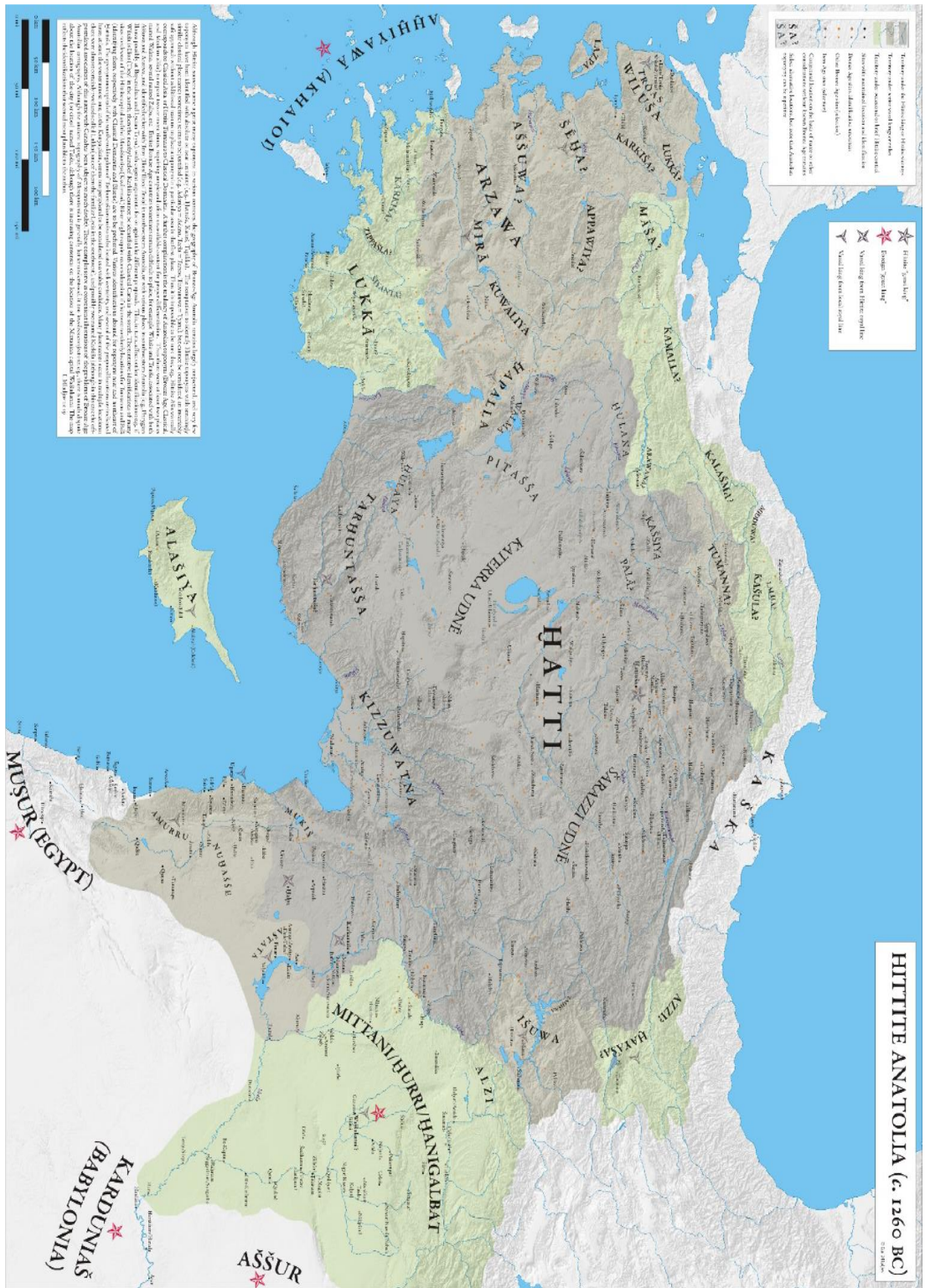
Source: <https://sites.google.com/a/umich.edu/imladjov/maps>

Table 1 Terminology and Periodization for Central Anatolia in the Iron Age

Culture	Historical	Archaeological	Chronological	Date
Hittite	Hittite Empire	Hittite	LBA	14-13 th centuries
Sub-Hittite	Post Empire	Post Empire	Early Iron Age	Early th century
Dark Age	Dark Age	Dark Age	Early Iron Age	12-11 th century
Neo-Hittite Kaska? Phrygian Mushkian	Neo-Hittite Kingdoms, Tabal Phrygian Kingdom	Neo-Hittite Alishar IV? Phrygian	Middle Iron Age	10-7 th century
(Assyrian)	Sargon II campaigns	not recognized	Neo-Assyrian	708
(Cimmerian?)	Cimmerian	not recognized	Destruction?	mid-7 th century
Lydian Phrygian	Lydian Expansion	YHSS	Middle Iron Age Archaic?	ca.600-550
(Median) Phrygian	Median-Lydian War	not recognized	Middle Iron Age Archaic?	ca. 590-550
Persian	Conquest of Cyrus	Destruction at Kerkenes and Gordion	Achaemenid or Persian Late Iron Age	547-333
Hellenistic	Alexander the Great	Hellenistic	Hellenistic	333 onwards

Source: Summers, 2008, p.205

Figure 2 Hittite Anatolia (c.1260 B.C. E)



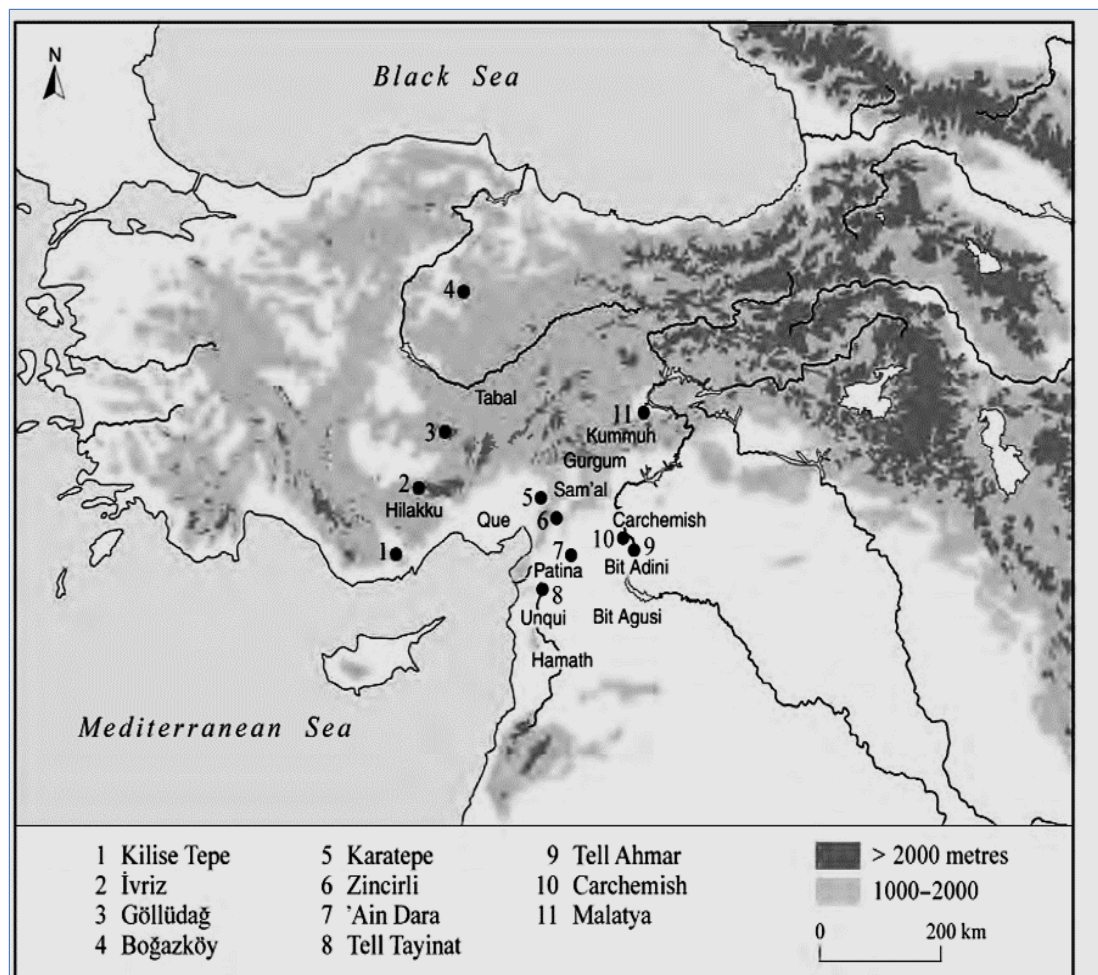
However, this progress which developed in Bronze Age witnessed stagnation and eventually collapse. The Bronze Age ended with the collapse of the Hittites (12th BC), and Anatolia found itself in a dark and chaotic environment, perhaps more than ever. Numerous new kingdoms or states that had never been seen before in Anatolia emerged. With the collapse of the Hittites, Anatolia went into a period of stagnation where no dominant power could rise for a long time. The following chapters will give a detailed picture of Central Anatolia during the Iron Age.

Iron Age in Anatolia began with the collapse of the Hittites after 1200 BC and ended with the collapse of the Achaemenid Empire 330 BC. (Genz, 2011, p.332). Collapse refers to rapid or dramatic political and social change. (Middleton, 2012, p.267) The collapse of the Hittite Empire 1200 B.C.E. was a dramatic political and social change for the history of Anatolia. It was not just the Hittite Empire that disintegrated; all of the other major powers of the eastern Mediterranean and Near East suffered severe reverses in the twelfth century in what has been called the “crisis years” (Sagona & Zimansky, 2009, p.291). At the same time, but in different places, there were other collapses such as Mycenaean civilization in mainland Greece, Troy (VIIa) in Anatolia, Ugarit (Ras Shamra) in Mesopotamia and the attempted invasion of Egypt by the so-called Sea People, as well as Cyprus, the Canaan land, and Syria. Middle Assyrian Empire receded into its core territory in northern Iraq (Sams, 2011, p. 604; Cline 2021). When we look at Anatolia, the political situation is more complex than ever. Phrygians, predicted to have come from the Balkans, filled a large part of the void created by the Hittites in Central Anatolia. The Phrygians who appeared in Anatolia during the Early Iron Age, ca. 1200-1000 B.C.E., covers a broad area in Western and Central Anatolia, which includes Daskyleion near the Sea of Marmara in northwestern Anatolia, Gordion and Ankara in Central Anatolia, and Boğazköy and Kerkenes Dağ east of the Halys (Kızılırmak) River. (Roller, 2011, p.560) After the destruction of Phrygia by the Cimmerians around to 700 BC, Lydians, gained political and economic sovereignty. Eastern Anatolia witnessed the emergence of a mighty empire so-called the kingdom of Urartu that had clear cultural ties to northern Mesopotamia. (Sagona & Zimansky, 2009, p.291) The Aegean coasts were inhabited by Greeks. In the Late Bronze Age, they had some commercial and political ties in the territory, but by the

eleventh century B.C.E. they were pretty settled (Sams, 2011, p.607) On the ruins of the Bronze Age civilizations, a new and vigorous Greek culture was born. Around the same time, southern Anatolia was not affected by the invasion (1200 B.C.E) as much as the coastal regions of the Levantine (Matney, 2011; Bartl, 1995, p.447). There were a lot of small principalities that emerged in Southern Anatolia.

These “Neo-Hittite”, “Syro-Hittite,” or “Late Hittite” principalities, as they are variously called, gather up some of the old elements of the defunct empire and represent them in quite new and different ways. In the Levant generally, there was widespread devastation, most vividly illustrated in the ruins of Ugarit, where five millennia of settlement terminated in massive archaeologically rich destruction level. (Sagona & Zimansky, 2009, p.294)

Figure 3 Map of Neo-Hittite Sites



Sources: Sagona & Zimansky, 2009, p.294

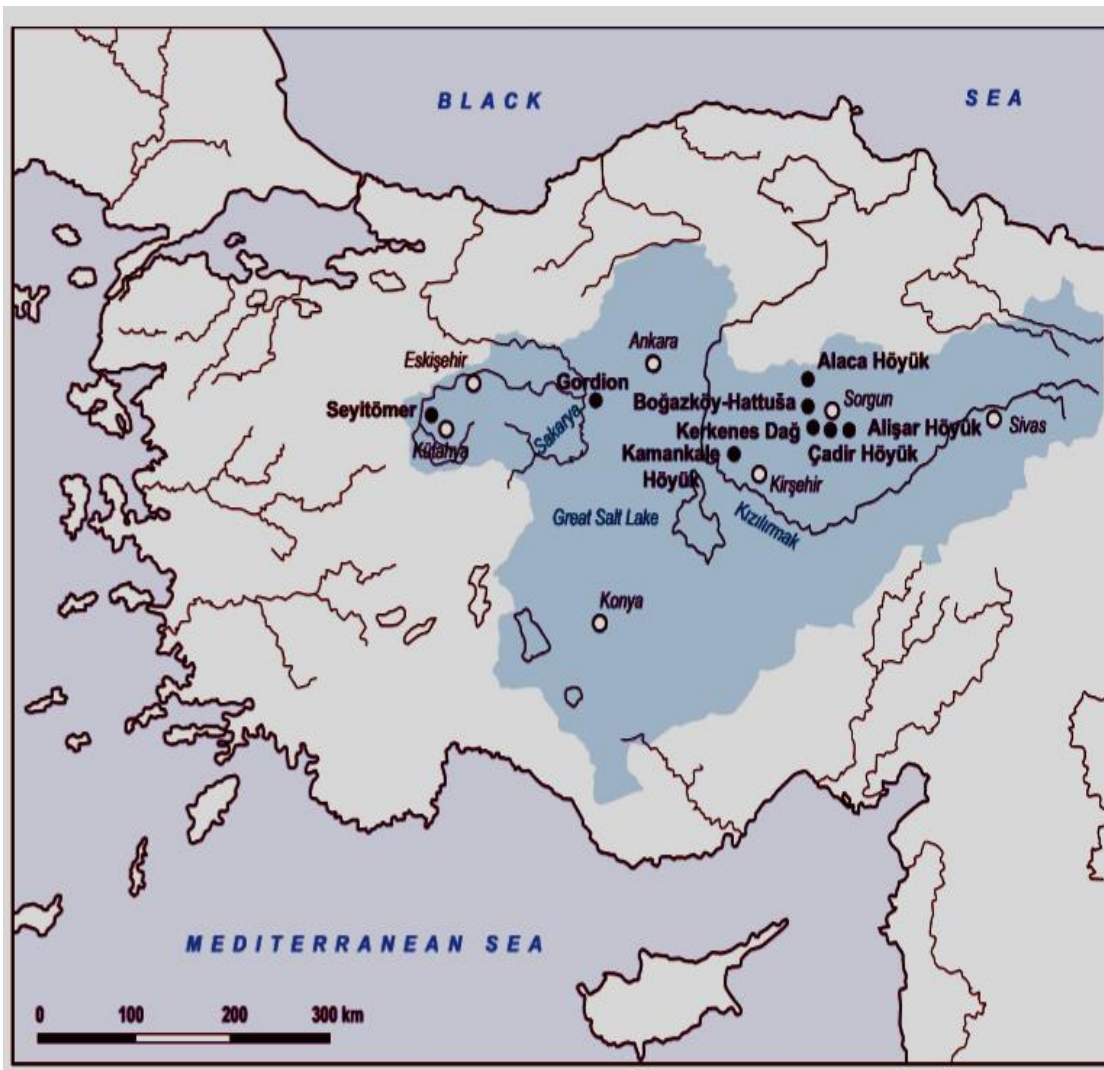
While there was certainly a political collapse, this would not necessarily mean there was also discontinuity in culture. Around the same time the Phoenicians flourished.

They settled in a minimal geographical area that covered the middle Levant, the Lebanese coasts, and North Syria. Because geography restricted agricultural areas, their source of wealth was trading. They traveled through Mediterranean to find metals, and all the way to Cilicia, Cyprus, Morocco, North Africa, Sicily, and Iberia. (Gates, 2015, p.259-260)

3.1 Geography of Central Anatolia

A series of mountain ranges, flat lands, and several lakes and rivers identify the plateau of Central Anatolia geographically. The region is defined as the Anatolian plateau. The region is surrounded by a range of mountains where in the northern part is Pontus, and in the south, Taurus Mountain takes place. There is Anatolian Highlands in the eastern part. (Genz, 2011, p.331) Its climate is semi-arid with dry summers, and wet winters. The average precipitation is about 400 mm. For farmers in local farming communities, drought must have been important issue (Kealhofer & Grave, 2011, p.416-417). The Central Anatolia is at this time called Phrygia, encompassing the regions around Gordion and Midas Şehir; the south-eastern part, south of Kızılırmak, is called Tabal (Genz, 2011, p.331)

Figure 4 Map of Anatolia showing Central Anatolian Plateau and Topography



Source: Kealhofer & Grave, 2011, p.416

There is a substantial difference between the highlands and lowlands of Central Anatolia. For example, there is more precipitation at Kerkenes (Yozgat) than Gordion (Polatlı). Although it is very hard to determine how exactly was the climate of Central Anatolia in Iron Age, there are some estimations. Data from Nar Gölü suggests that there was an increasingly humid climate beginning around 600 B.C.E. (Marston & Branting, 2016, p.27) Nar Gölü is in modern Niğde which is in lowland of Central Anatolia. Also, the late Early Phrygian/early Middle Phrygian period appears to have been one of moister, cooler periods with more reliable rainfall, perhaps making it a more stable period for agricultural production. (Graves & Keolhofer, 2011, p.420)

3.2. Phrygian Kingdom in Central Anatolia

While Amelia Khurt suggested that Phrygia and Lydia's histories are utter darkness. There is not a single local document which we can understand from this period. There are written documents which come from Assyrians and Greeks, but they are indirect and subjective. On the other hand, archaeological material from Phrygia is ample and these provide substantial information to understand these kingdoms. (Khurt, 2013, p.243) Few documents in Phrygian language offer some information but there is no list of Phrygian kings or no annalistic tradition. (Roller, 2011, p.561) Sagona & Zimansky (2009) claimed that the name Phrygia is given by the Greeks and on Assyrians cuneiform inscriptions Phrygia is indirectly mentioned and the cuneiforms do not mention Phrygia by name; instead, they speak of an Anatolian kingdom called Mushki, which the Greeks had never heard of. (2009, p.353) Herodotus said that according to the Macedonians, the Phrygians were called Bryg when they lived in Europe, and they were neighbors of the Macedonians; Phrygians' names changed with their homeland after they crossed into Asia. (Herodotus, 2006, p.7,73) Roler explains that the Phrygian language belongs to the Indo-European language family, and it has affiliations with Greek and Thracian. (Roler, 2011, p.561 quoted by Strabo 7.3.2) However, according to Sagona & Zimansky, it doesn't belong to Anatolian family which has Hittite, Luwian and Lydian. (Sagona & Zimansky, 2009, p.353) Both linguistic evidence and ceramic suggests a migration from the Balkans during the early first millennium B.C.E. (Roller, 2011, p.561)

Figure 5 Map of Phrygia



Source: <https://www.penn.museum/sites/gordion/>

Furthermore, there are extremely vague similarities between the EIA handmade pottery at Gordion and roughly contemporary pottery from Thrace and Troy VIIIb 2–3; therefore, it can be said that the archaeological remains of this period can be associated with the migration of Phrygian-speaking people to Central Anatolia (Voight, 2011, p.1077). It would not be realistic to suggest that the Phrygians came to Anatolia in a single migration wave. After the Hittites, Phrygians gradually came to Anatolia from Macedonia, and they eventually filled up the political vacuum which

was left by the Hittites. They established a powerful state especially at Gordion and in the vicinity of Afyonkarahisar, Eskişehir, Kütahya, Manisa and Konya (Memiş, 2020, p. 1921-1924). In the seventh century B.C.E., the Phrygian kingdom declined, and its capital (Gordion) was taken by the Lydians by the early sixth century B.C.E.” (Marston, 2012, p.381) Herodotus claimed that the Phrygian Kingdom was destroyed by the Cimmerians who came from the Caucasus, but excavations indicate that this attack suspended a break, and there is no sharp end culturally. (Gates, 2015, p.245) We know that the Phrygians left a lot of traces at several substantial settlements, and if we want to bring to light questions like what those materials were, when and why they were made, how were they used, but especially in an attempt to understand their economy we must look at those archaeological sites which had the Phrygian settlements. When we do that, we may get a chance to see political, economic, and cultural structures of Phrygians. However, Grave & Kealhofer (2001) suggest that there are not much published, excavated sites like Boğazköy, Çadır Höyük, Gordion, and Kaman Kalehöyük and other sites such as Şar Höyük, and Seyitömer will support our understanding of the region (2011, p.423).

3.3 Gordion

The Citadel Mound of Gordion, Phrygians capital city, is approximately 100 km southwest of Ankara on the Sakarya River and was occupied from at least the Middle Bronze Age to the Medieval period. (Grave & Kealhofer, 2011, p.428) The site of Gordion was “discovered” in November 1893, Körte identified the site as Gordion primarily on the basis of what ancient literary sources had to say about the old Phrygian capital, such as its location on the *Sangarios (Sakarya River)*. Gordion is also one of the key sites in Central Anatolia that offer a long occupation sequence from the Early Bronze Age to the early 1st millennium AD (Voigt, 2011, p.1997). Gordion, Boğazköy, Alişar, and Sardis provide factual information to understand the nature of early civilizations during the Late Bronze and Iron Ages.” (Kealhofer, 2005 p.1) Although most of us know about Gordion from the knot which was cut by Alexander the Great, most of our information about Gordion derives from excavations.

Table 2. The Yassıhöyük Stratigraphic Sequence (YHSS)

YHSS Phase	Period Name	Approximate Dates
0	Modern	1920s
1	Medieval	10-15 th century C.E.
2	Roman	1 st century B.C.E.- 4 th century C.E.
3A	Later Hellenistic	260? -100 B.C.E.
3B	Early Hellenistic	333- ?260 B.C.E.
4	Late Phrygian	540s -333 B.C.E.
5	Middle Phrygian	After 800-540s B.C.E.
6A-B	Early Phrygian	900-800 B.C.E.
7	Early Iron Age	1100-900 B.C.E.
9-8	Late Bronze Age	1400-1200 B.C.E.
10	Middle Bronze	1600-1400 B.C.E.

Source: Voight, 2011, p.1074

3.4. Climate

Forest and scrub forest covered the Central Anatolia during the period from 10.000 to 5.000 years ago. An increase in vegetation and rainfall gave rise to a relatively stable environment, high water table, and little soil erosion. Early Bronze Age settlements across the region were affected because the atmosphere had reached a cooler and drier regime between 4.000 and 5.000 years ago (Kealhofer, 2005, p.144). We mentioned before that the climate of Central Anatolia is continental rather than Mediterranean. At Gordion there was a humid period during the Late Bronze Age 1500 B.C.E. and then there had been an aridification era from 1500 to 1200 B.C.E. which coincided with the period of Hittite influence at Gordion. Between 900 and 600 B.C.E the climate remained stable and ameliorated. According to some data, aridity had increased until

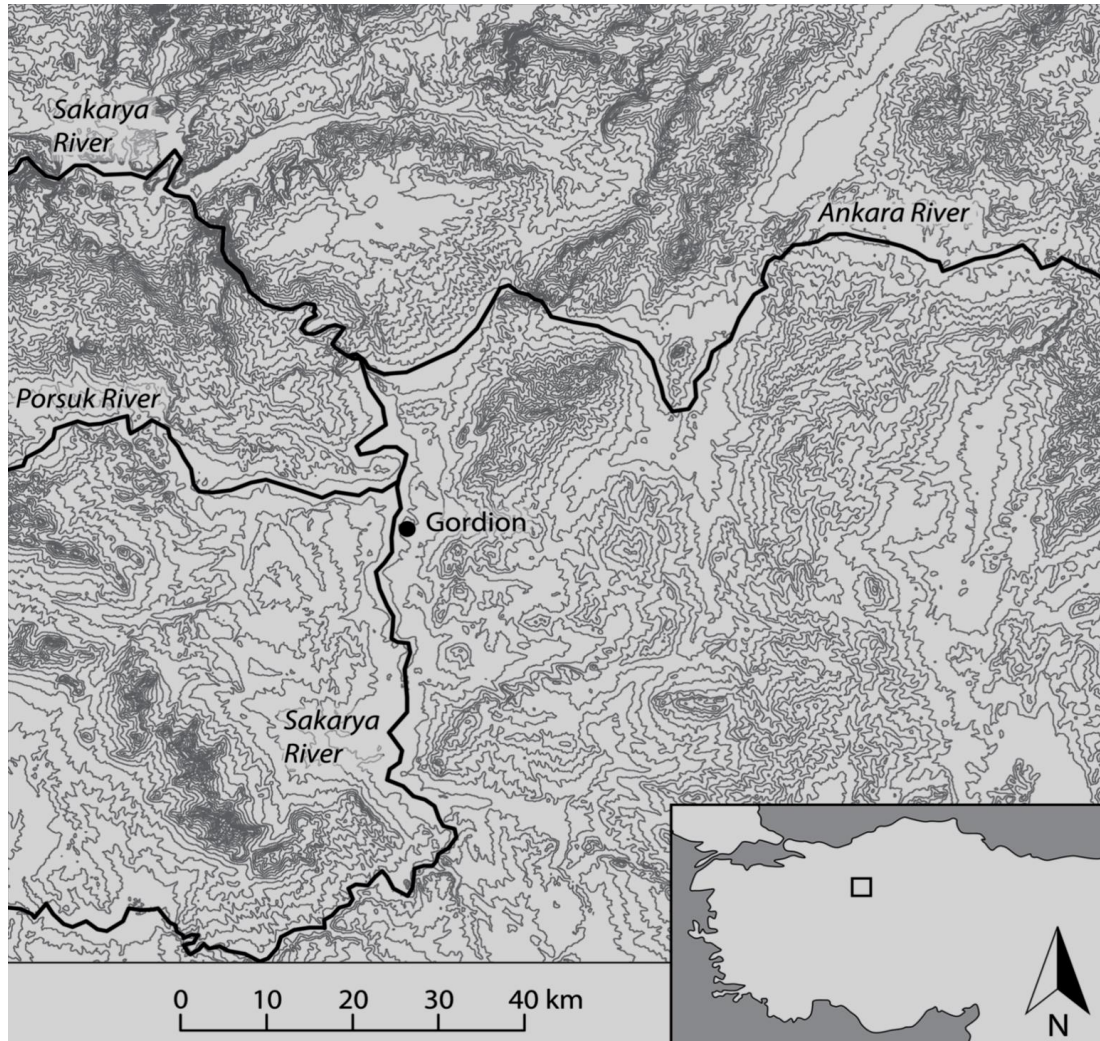
the beginning of the Common Era. However, some data indicate that there was a continuing amelioration. (Marston, 2012, p.386) Precipitation in the interior regions of Anatolia, near Gordion, was very similar to modern day from the middle Holocene (6.000 BP.) (Marsh & Kealhofer, 2014, p.690)

3.5. Land and Vegetation

There are three distinct topographic units within Gordion. Its maximum size (eighth century B.C.E.) is approximately one square kilometer. (Voight, 2011, p.1069) Gordion is located on the west bank of Sakarya river. It presents a wide and barren settlement view towards the west. Its height from the river is about 100 meters, and the settlement is dominated by a moderately dry Mediterranean climate (Marsh, 2005, p.161). Three major classes of arable soil occur near Gordion in patterns closely controlled by bedrocks. First is one being tan alluvial soils which are usually productive and easily irrigable. The second one is pale fan, pediment and related residual soils that are loose and drought-prone now almost exclusively in wheat and barley. The final one is basalt derived soils that have with high nutrient and moisture capacity and those are highly prone to erosion. (Marsh, 2005, p.164-165) Erosion affects the soil quality, stream, and spring flow because it gives rise to fertile part of the soil to be transported. Subsequently, those soil pieces fill to stream sources and fresh water, which is necessary to both people, animal, and plants, is degenerated. At Gordion, precipitation and tree cover begin to decline with elevation. At 700m, precipitation is sufficient for dry farming, but rainfall is particularly erratic in the valley bottom where Gordion is located. (Miller et al., 2009, p.916) the Sakarya and Porsuk rivers are the main rivers, and many intermittent streams join their river valleys. The arable areas are found mostly in the valley bottom, lying along the Sakarya and Porsuk rivers. The average altitude of the area changes between 700 and 1000 meters. The areas above 800 meters are partly used for cultivation (Çonka, 2002, p.36). Gordion also benefited from copious springs of potable water and access to both arable land and forests. It is therefore no surprise that Gordion occupied a prominent place in the settlement history of Anatolia for over three millennia. (Stewart, 2010, p.6) In all periods of occupation, people at settlement focused on locally grown cereals (primarily

wheat and barley) and pulses (lentils and bitter vetch). Also, sheep, goats, cattle, and pigs provide meat and dairy products. These animal's bones comprise roughly 90% of the total faunal assemblage. However, the ratio of sheep and goat to cattle and pig bones does change substantially over time (Marston, 2012, p.387-388).

Figure 6 Map of Gordion, showing the topography of the region



Source: Marston, 2012, p.386

3.6. Chronology

A large flat topped höyük—the “City Mound,” “Citadel Mound,” or simply “citadel”—rises 16 m above the plain with an occupational area of approximately 12 ha. Immediately to the south of the City Mound lies a fortress with adjacent walls, the

Küçük Höyük (“little mound”), standing 22 m above modern ground level and spanning across an area of 7 ha. Gordion has been settled since M.B.A, and the resources had been exploited sources such as springs, lands, etc. through centuries. However, the exploitation process changed from one political organization to another. “Centralized economic or political control of the rural landscape should favor land use that is efficient in exploiting the most productive agricultural resources. Less resilient sectors of the landscape would be used less.” (Marsh & Kealhofer, 2014, p.697)

Our aim in this thesis is to recognize this kind of relationship between political organization and production, land use, and animal husbandry. For this, transition periods such as from Bronze Age to Iron Age in Central Anatolia offer good evidence as this transition was marked by chaos, population changes, decentralization, etc. Economy and policy cannot be separated from each other. In other words, the political situation often is a vital deterrent factor of how the economic life in a polity would be. Transition periods may offer the best examples of an understanding relationship between economy and policy.

3.7. Gordion During the Bronze Age (1600-1200 B.C.E)

We saw that in the first chapter of this thesis, there are two main theories about ancient economies. First one is Modernism which assumes that ancient economy was a functionally segregated and independently instituted sphere of activity with its own profit-maximizing, want-satisfying logic, and rationality. The second one is the Substantive view which claims that processes of material provisioning cannot be understood separate from the broader social sphere. As a result, behaviors such as maximization, utility, and rational choice cannot be understood in the universal terms used by neoclassical economics because they are culture specific. Also, Karly Polanyi’s views are very similar to primitivist/substantivism, and he said that ancient societies have a subsistence economy in which people only produce enough for themselves. In other words, household production is the main economic activity in ancient societies. However, there is a problem with these views since they see

economic activity as static through time. But, if we approach the situation in the *long durée* in one territory, we can see that economic activities may change according to the as political situation as in Gordion.

Figure 7 Hittite loom weights from Gordion



Source: Burke, 2010, p.111

Gordion was a very significant settlement of the Hittites. During the Late Bronze Age, Gordion was a production and administration center of the Hittites because standardized wheel made pottery showed similarity to Hattusa, which was the capital of the Hittites and, a locally made vessel which had a personal name in Hittite hieroglyphics was discovered there (Marston, 2012, p.379).

Hittite-style vessels found at Gordion indicate that they were mass-produced by specialized potters. Volume of pottery produced at Gordion during this period was greater than what was needed locally; they suggest that a regional pottery distribution network was centered at Gordion that the site's economy was based on craft specialization and exchange, as a node in the Hittite economic network. (Marston, 2012, p.383)

Strong typological and technological links to the Hittite heartland in terms of ceramic traditions indicate that Gordion had been a minor political center of the Hittites in the

third quarter of the second millennium. (Henrickson & Blackman, 1996, p.78) In the LBA Gordion was a settlement where mass production of ceramics points to an economy based on specialization and exchange (Voight, 2011, p.1076) On the other hand, Gordion fell into a political vacancy at the end of the LBA Settlements in Gordion dropped off substantially and sherd density declined ca. 50% in the area around Gordion region during the LBA. Smaller towns and villages were abandoned. (Kealhofer, 2005, p.147) Whether this drop represents a decline in population or a consolidation into a smaller number of larger sites has not yet been determined. (Voight, 2011, p.1076) In the LBA, there was a population change in Gordion, and a new group which came from Thrace and Balkans occupied the site near the first millennium B.C.E.

3.8. Early Iron Age at Gordion (EIA, c. 1100–950 B.C.E)

Standardization in pottery production, craft specialization and mass production were interrupted in the Early Iron Age (1100-900 B.C.E) as a result of decline of the Hittites hegemony in Central Anatolia. Gordion also was affected by this political situation, and we can recognize political and economic alterations in archaeological data from Gordion. There are visible changes in architecture and material culture at Gordion such as house orientations, construction technique, floor plans, pit shapes, ceramic style, and ceramic production. According to these data, there is a population replacement which indicate that Phrygian-speaking peoples came into central Anatolia from the Balkans. (Marston, 2012, p.379) However, these new people had not formed a centralized political unity during the EIA. They have been relatively mobile, and they did not leave important material traces on landscape. (Marston, 2012, p.382) EIA was marked by beginning a process which culminates in a state-level polity (Voight, 2011, p.1079)

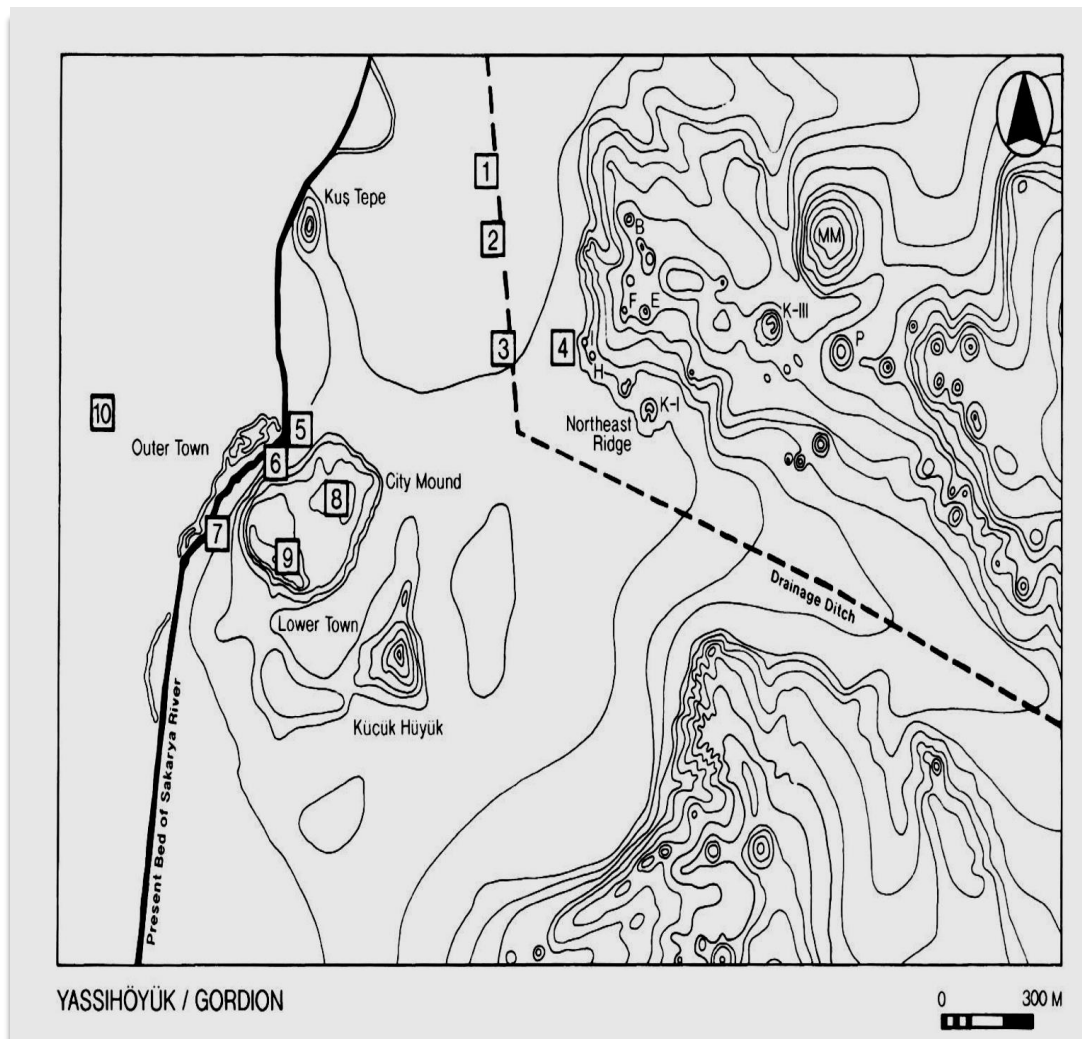
The Early Iron Age pottery is handmade, fired at low temperatures, and highly variable in form and decoration—all attributes of a household ceramic industry. Buff pottery is made from Sakarya River clays and was probably produced by potters who were part-time specialists. (Voight, 2011, p.1077)

This demonstrates that there was a production which was based on household level. However, new standardized vessel shapes were introduced by EIA (Marston, 2012, p.383) EIA handmade assemblage indicates that there was a non-professional group who worked in household ceramic industry. Vessels were produced only when needed and for ad hoc. However, there is an exception which is related with buff ware production. They exhibited standardization corresponding to full or part-time specialists who could work in humble workshops. (Steward, 2010, p.16) In the EIA standardized production was observed on a large scale. There was standardization in terms of methods of manufacture in addition to shapes and sizes, and they shared a general simplicity of finish. (Henrickson & Blackman, 1996, p.78) YHSS 7 ceramics are not durable and perennial. Most settlements indicated campsite features which were used by nomadic pastoralists. (Voight, 2011, p.1077)

3.9. Early Phrygian Period (900-800 B.C.E)

Gordion witnessed construction of formal and monumental buildings in the Early Phrygian period that coincided with the rise of the Phrygians. (Çolak, 2002, p.43) New immigrants in Gordion began to form a centralized kingdom. With the late tenth century B.C.E, Gordion became the political center of the Phrygians (Miller et al., 2009, p.917) This period was marked by beginning of a process which culminated in a state-level polity. (Voight, 2011, p.1079) For the first-time great fortification walls and monumental buildings appeared at Gordion during the Early Phrygian period. They indicated that there was a leader or elite who had enough resources and authority to finance and organize large scale construction projects. Also, elite or leader had authority to mobilize labor which required to build them. (Steward, 2010, p.20) During the Early Phrygian period, there had been exploitation in a wider region at Gordion. It became a capital, subsequently it remained an economic center through most of the first millennium B.C.E. In this period, not only Gordion itself but also several places across the settlement provided sources for producing pottery. It could be a mark of increasing of the city. (Henrickson & Blackman, 1996, p.78-79)

Figure 8 Map of the Gordion area, with sources of pottery and clay samples marked.



Source: Henrickson and Blackman, 1996, p.68

1-3: Drainage ditch 2 m deep cut through floodplain.

4: Well drilling, sample from 12-13 m depth.

5-7: Banks of Sakarya River.

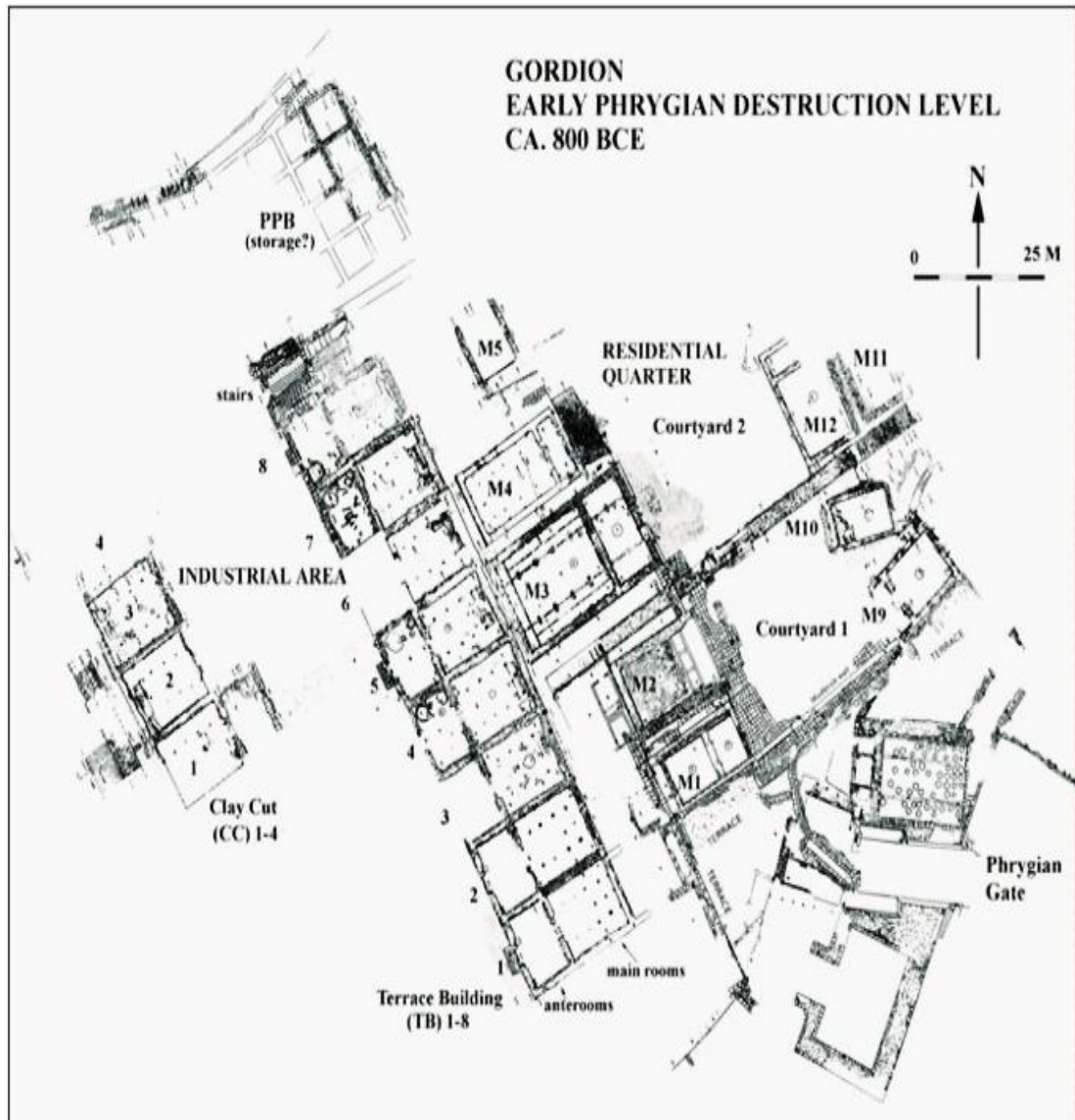
8: Yassihöyük Stratigraphy Sequence trenches and Early-Middle Phrygian clay fills in eastern half of City Mound.

9: Middle Phrygian clay fills in western half of City Mound.

10: Pottery samples from sounding (Op. 22) in Outer Town.

A lot of spindle whorls came from the Early Phrygian destruction level, but all of them have a distinctive and asymmetrical decoration. (Burke, 2005, p.73) On the other hand, there is relative homogeneity in the standardization of vessels within these large groups; therefore, it indicates the existence of specialist potters in a limited number of workshops. (Henrickson & Blackman, 1996, p.77)

Figure 9 Gordion Early Phrygian Destruction Level



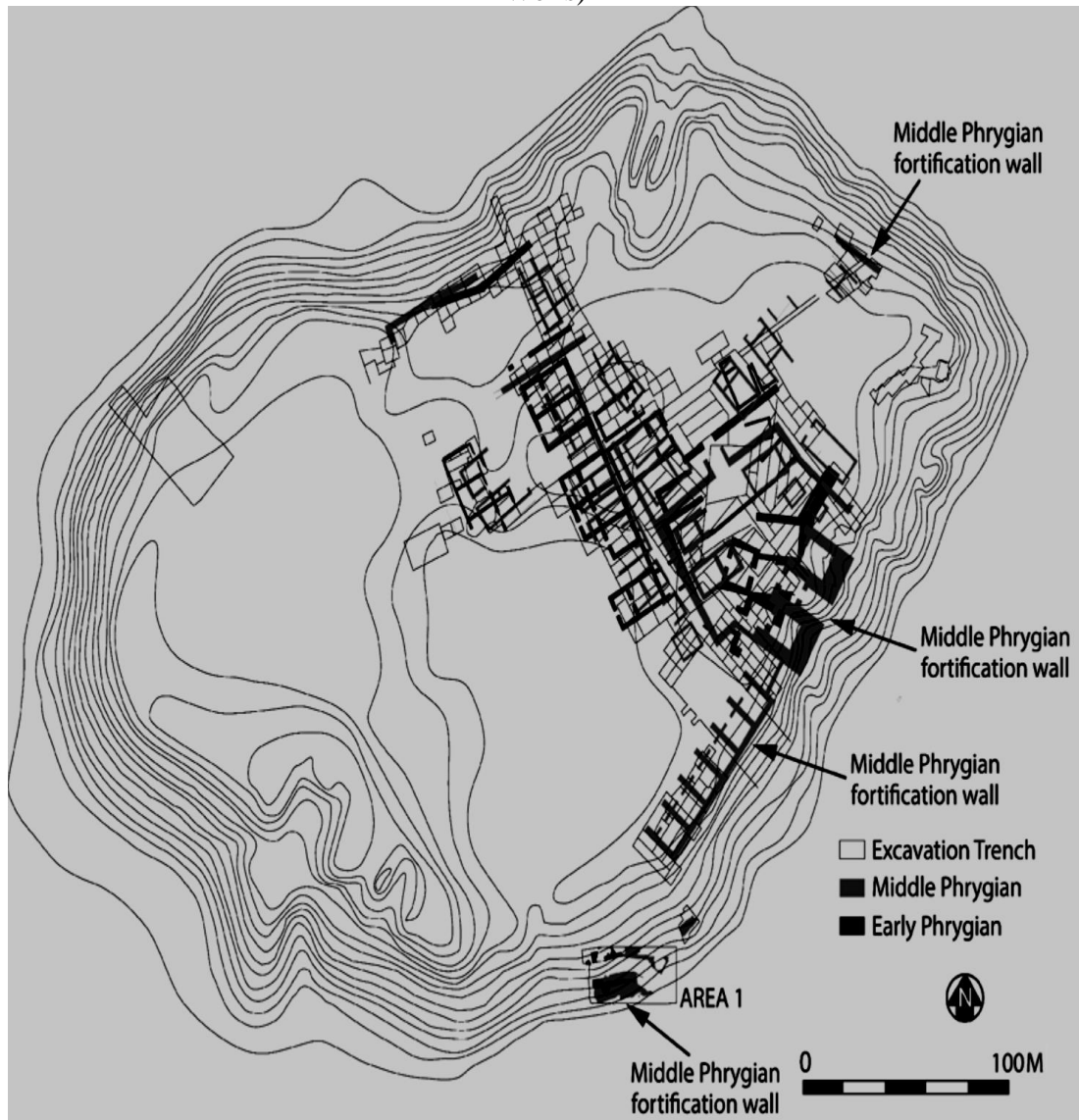
Source: Burke, 2005, p.70

Most luxurious items, including carved ivory furniture inlays, fine bronze and clay vessels, wooden furniture, a deposit of gold pieces, fragments of woven textile were found in Megaron 3. Also, spindle whorls and loom weights which are associated with textile production were found in Megaron 4. There were separate workshop units for workers who produced cloth and food production in there. (Burke, 2005, p.69-70-72)

3.10. Middle Phrygian Period (800-540 B.C.E)

During the Middle Phrygian Period, Gordion witnessed major building operations because of the Phrygian policy. This period was characterized with an increase in urban population because the Phrygian policy was becoming larger and more powerful. (Marston, 2012, p.380). There was a substantial growth in size, wealth, and power in Gordion. The settlement was widened over 1 square km. (Miller et al., 2009, p.917) This happened because kings or rulers of this period, had substantial power to mobilize labor force in order to re-create and enhance a citadel. A citadel was a symbol of their right to collect tribute or taxes from commoners. Their tombs, especially Tumuli MM, indicated the wealth and craftsmanship of Phrygians. (Voight, 2011, p.1085) Generally, the most sustainable land use across Gordion was pastoral production. However, the high population began to necessitate reliance on agriculture only during the wealthy Middle Phrygian period. The policy of Phrygian rulers and population growth encouraged to intensive land use. During this period, large-scale irrigation systems were implemented across the settlement to increase agricultural production to feed the growing population (Marston, 2012, p.391). Both botanical and faunal data demonstrate that agricultural activities took place more intensively and irrigation systems supported that during the Middle Phrygian period. Except from the policy and population growth, two factors had affected land use practices during the MP period. One of them is that there was a slight increase in precipitation which made agriculture less risky. The other one is that soils had accumulated in the lower catchment which created broader and more stable surfaces for agriculture near the Sakarya River. (Marsh & Kealhofer, 2014, p.697) With the increasing land-use, Gordion was exposed to deforestation, overgrazing and erosion in the MP period. (Marston, 2012, p.394)

Figure 10 Plan of the Gordion Citadel Mound showing the Middle and Early Phrygian periods (Gordion Archaeological Project; from an original plan by Martin Wells)



Source: Dusiinberre, 2019, p.111)

Furthermore, even though caprine usually dominated in each occupation phase at the settlement, both numbers of cattle and pig which consisted of more than 40% of meat resource began to increase in the MP period. (Miller et al., 2009, p.919) This statistic can offer an important foresight on economic situation. Although pigs are linked with decentralized animal economies in zooarchaeology, cattle represent a substantial investment of resources, and it also has both economic and symbolic value. (Ross et al., 2019, p.34-35)

3.11. Late Phrygian Period (540s – 333 B.C.E)

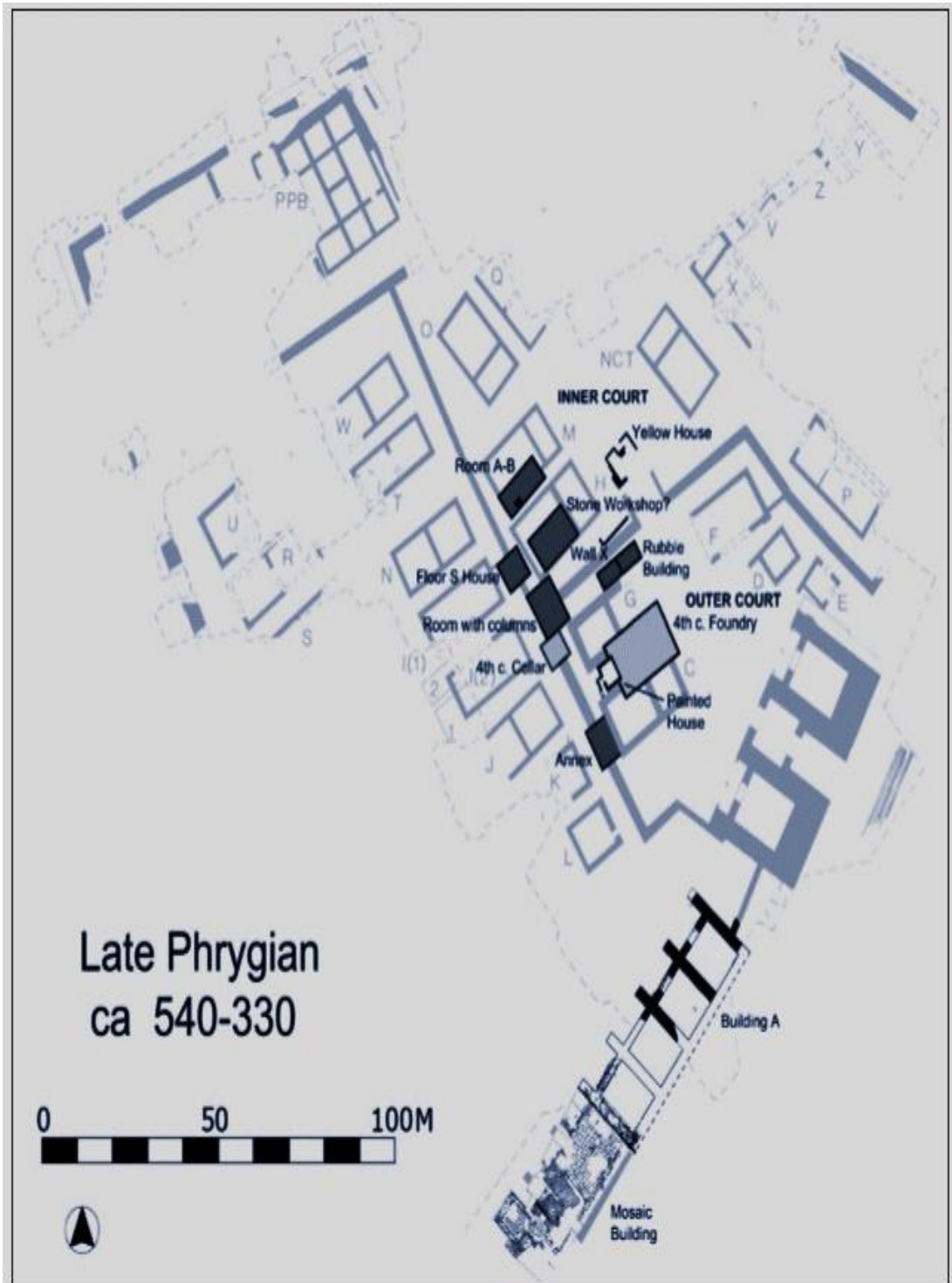
During the Middle Phrygian period, Gordion had been one of the most important settlements in Central Anatolia in terms of political and economic activities of Phrygian. This process was interrupted by Lydian attacks to Gordion, and then demolition at the settlement accelerated under the Achaemenid period. Gordion had lost its feature of being a political center, but its economic importance had continued during the Achaemenid period. Late Phrygian period in Gordion represents a dichotomy which is autonomy and authority. Firstly, we can look at the concept of autonomy which means the right of a county or group of people to govern itself or the quality or the state of being self-governing in the Cambridge and Webster Dictionaries. However, this concept can have a different meaning than dictionary.

Autonomy may be local, with geographically conscripted responses to the imposition of imperial authority. But autonomy may also spread across an issue regardless of geography: autonomy may emerge in a whole category of behavior, such as funerary customs or the education of children. (Dusinberre, 2013, p.4)

In other words, autonomy doesn't have just a political meaning, and it may show up on fields of culture, language, ritual, ceremony, and habits. For example, there was some continuity between Middle Phrygian and Late Phrygian periods. Gray wares still constitute an essential part of the ceramics produced. Their shape and surface treatments are closely related to the Middle Phrygian period. This similarity can be shown in the production of black polished ware. (Stewart, 2010, p.44-45)

Although there was a continuation in techniques of pottery making, there seems to have been no continuation in the economic and political activities. At least Gordion had been connected to a wider trade network which tied west and east during the Achaemenid period. There is no doubt that the Achaemenid Empire was one of the most important state and power of all times and it changed and shaped both the eastern and western world. If we want to understand Gordion during the Achaemenid power, we must first discuss what is an empire.

Figure 11 Plan of Gordion in the Achaemenid/Late Phrygian period, superimposed on the Middle Phrygian layout (Gordion Archaeological Project).



Source: Dusiinberre, 2019, p.112

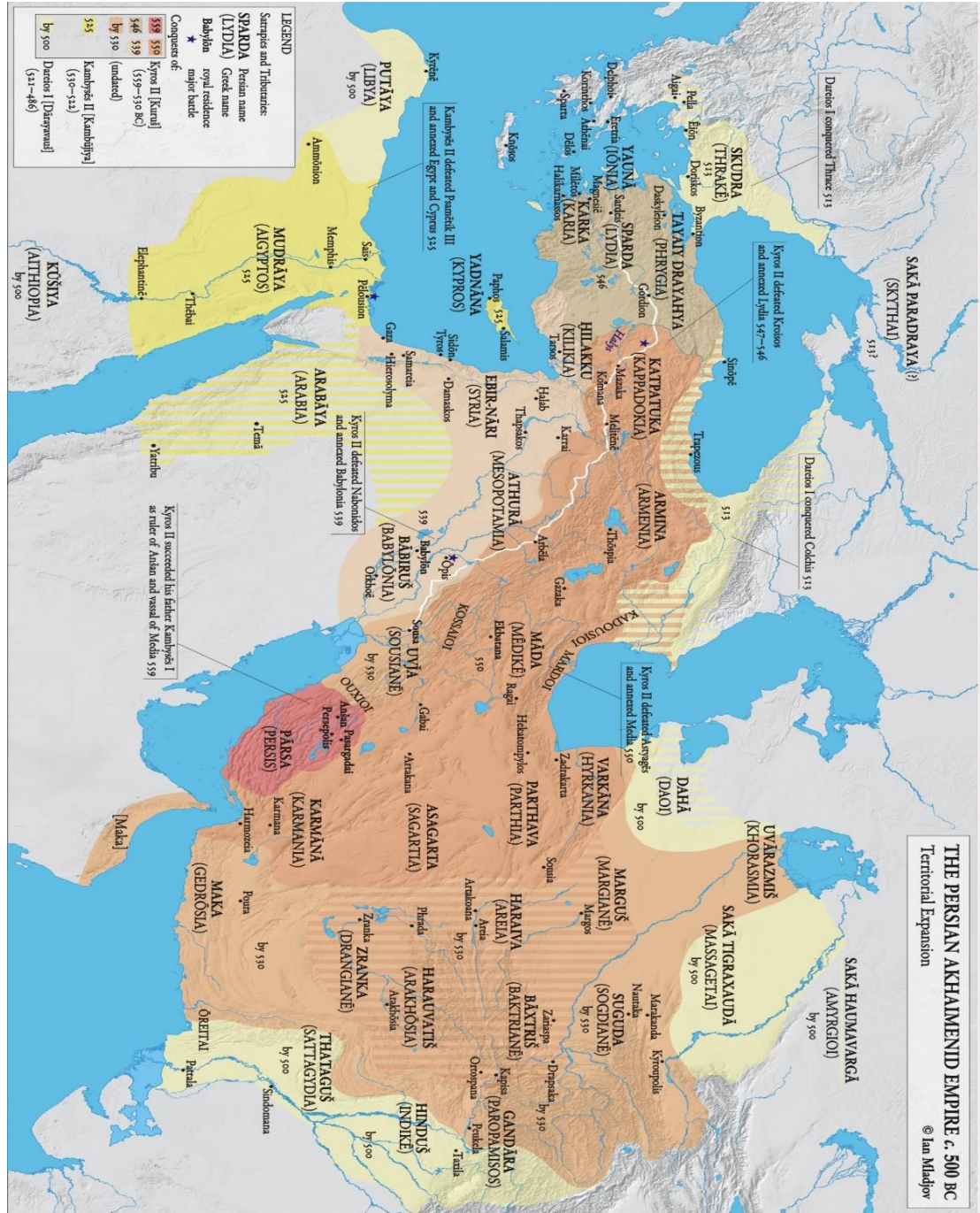
Empire, then, is about political authority relations (as well as many other transactions) between a central power and many diverse and differentiated entities. Such a characterization of empire underscores the importance of relations between the imperial state that is in a core central structural position and the different segments that comprise the imperial domain, where power and control remain key to the state, yet the imperial state does not have complete monopoly of power in the territory under control. (Barkey, 2008, p.9-10)

Within the Achaemenid Empire, there were twenty-three distinct subject peoples who had different languages, environments, and social customs. Such a great empire allowed each these various peoples to function within the confines of imperial authority. This flexible empire had an ability to provide the needs of those various peoples. (Dusinberre, 2013, p.8) In the light of these interpretation and information, we can assert that there was a relationship which based on center and periphery operations. In this sense, Gordion played a peripheral role in which workshops produced in line with the wishes of Persian rulers. For instance, high quality colorless vessels were produced under Persian-influenced workshops and Gordion was a possible production centers in Asia Minor as well as Ephesus. Gordion could have been a producer and importer colorless glass vessels during the Achaemenid period. (Duncan, 2005, p.112-113) Moreover, crisp profiles and extraordinarily smooth surfaces on vessels may indicate use of a rapid wheel at all stages of production. There was a substantial increase in imports which came from both east and west to Gordion. In other words, people of Gordion enjoyed access to foreign goods during the Late Phrygian period (Steward, 2010, p.47-48). Imported Greek black-figure and black-glazed pottery increased. Amphoras for oil and wine were also found in large numbers (Çolka, 2002, p.50). Gordion's lost its feature as a political center under the Persians, but its role as an economic center flourished with the Persian Empire. (Voight, 2011, p.1086-1087)

Under the Persian administrative structure, Gordion was politically and economically linked with the other centers of Anatolia. In other words, the empire encompassed Gordion in its vast expanse (Dusinberre, 2019, p.118). It seems that Gordion gained a different identity (in terms of production and trade) under the Persian rule, which invaded Anatolia and established a great empire. Gordion, which was integrated into

a larger area, adjusted its production and trade accordingly. Production is generally designed in line with the wishes of a particular political group above the household economy.

Figure 12 The Persian Achaemenid Empire c.500 B.C. E



Source: <https://sites.google.com/a/umich.edu/imladjov/maps?authuser=0>

3.12. Discussion

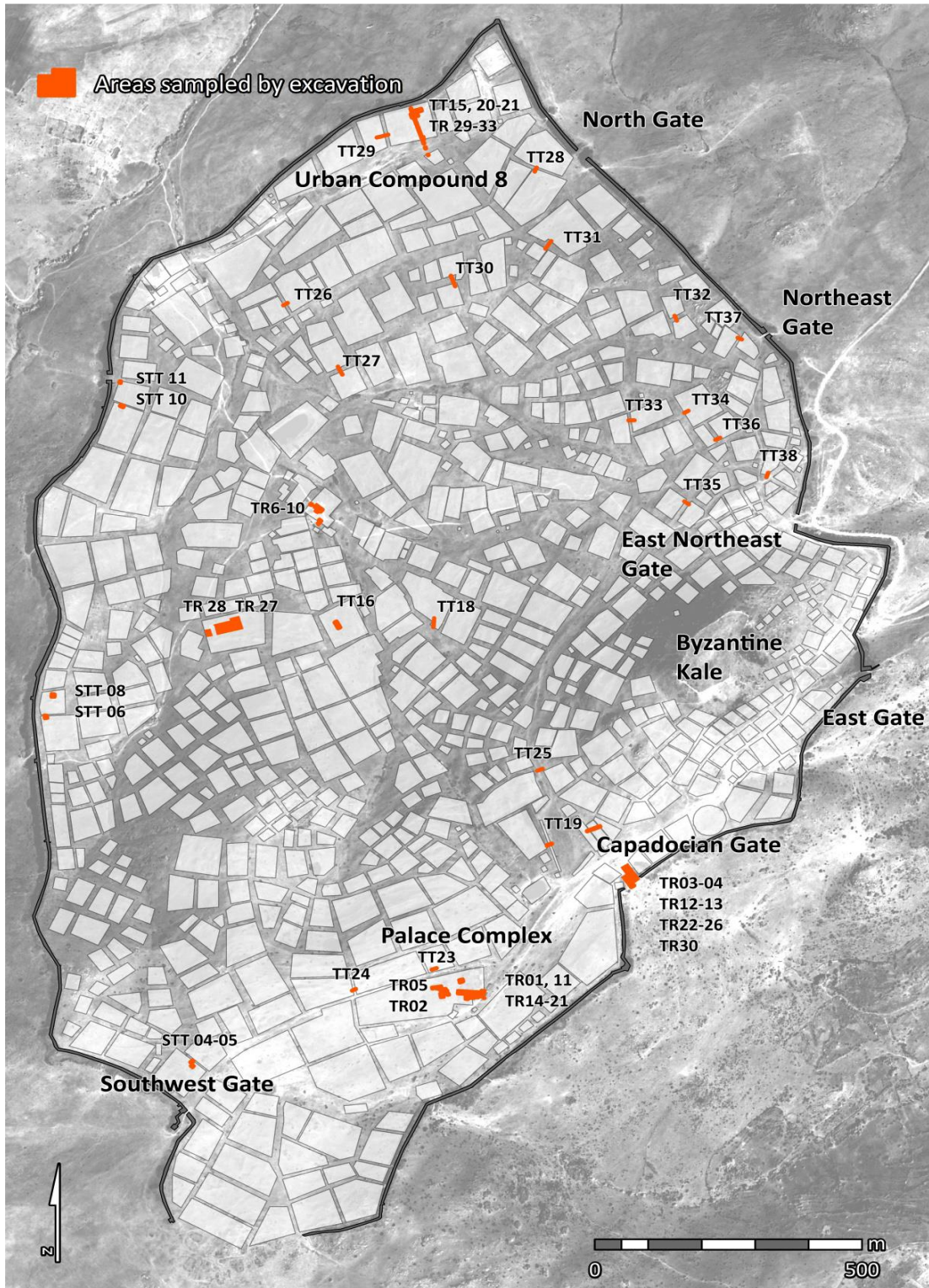
Production is not a static concept. It is the equilibrium between supply and demand in our post-modern world. However, pre-modern economies can be different from capitalism in quality and quantity even though some similarities can be established between them. For example, political structures and organizations substantially affect the economy in capitalism, and this situation might be valid for pre-capitalist economies.

A political organization refers to a politically organized body of people usually a specific territory. Such an organization has power that can change production amount at total and such an organization has means of production. In this sense, rulers who have labor force in their lands and force people to work. Also, they can increase the production beyond needs of the people to import, export, and feed the army which provide security of rulers. Besides the political organization, production amount can be affected by environment, climate, and land conditions, but even these conditions may be changed or alleviated by political organization (sovereign) with irrigation systems, water canals, land-use strategies. We can see such an effect at Gordion in the *long durée*. This settlement was a minor policy center under the Hittites and there was production beyond the needs of locals. Production's scale, and amount were determined by Hittite rulers or sovereigns. In Early Iron age, after the downfall of the Hittites, production's capacity dramatically decreased in Gordion and pottery became handmade, which must have been the result of a lack of sovereigns or rulers at the settlement. Production was determined according to local needs. During the Early and Middle Phrygian periods, the settlement had been exposed to major building operations, fortification walls, irrigation systems, extreme land-use, since ruling class went from strength to strength and sovereigns began to control labor to increase production. With the Achaemenid period, Gordion became part of a wider trade network, and it had become a production center of glass and pottery. In this sense, one can assume that superstructure which states law, politics, and religion or belief in Marxist terminology was very effective determining the production's amount, trade, and labor in Gordion. Without any rulers or sovereigns, people in Gordion produced only for own needs.

3.13 KERKENES: An Iron Age Site

Kerkenes has been identified by J.G.C. Anderson, followed by Von der Osten who realized in 1926, that the city was indeed a pre-Hellenistic settlement. In 1928, Eric Schmidt began to dig test trenches across the city and then Kerkenes was assumed as a Hittite settlement but after F. Schmidt began to work in 14 test trenches, he claimed that the site must have belonged to Post-Hittite Pre-Classical era. (Summers & Summers, 2010) After a long hiatus, Françoise, and Geoffrey Summers under the auspices of the BIAA in 1993, began to excavate at Kerkenes. (Summers 2006: 2017: 2006: 2009, Draycott & Summers 2008) Technological tools such as GPS and Electrical Resistance Measurement studies were formidably adopted in the excavation to understand city's plan and the position of dwellings, streets, city walls, and gates. (Summers 2007: 2008: Summers & Summers 2010, Summers et al. 2008) The Kerkenes Dağ (Mountain), which has an altitude of approximately 1,500 m. above sea level is located on the northern edge of the Cappadocian Plain. The city is open to strong winds from every direction. (Draycott & Summers, 2008, p.1) There is the Pontic Mountains in the north of the city which is within the large bend of the Kızılırmak. In a sense, the foundation of the city in such a region could be strategic. The city is 50km. southeast of Boğazköy lies 25 km. northwest of Alişar Höyük (Mound), and 10 km. northwest of Çadır Höyük (Kealhofer et al., 2010, p74) The proximity to other important sites could have been chosen intentionally because trade and exchange were substantial elements for a settlement to retain its subsistence. The Kerkenes which is suited to a low granitic mountain, is modern Yozgat province in Turkey. The settlement has a city wall of 2.5km. which is surrounded by seven km. of stone defenses pierced by just seven city Gates. Desiring to include water sources within the circuit could cause the huge size of the walls. (Summers, 2018, p.166) because the city has a relative abundance of perennial water seeping from fissures in the granite. (Draycott & Summers, 2008, p.1)

Figure 13 Iron Age city plan of Kerkenes Dag noting areas sampled by excavation up to 2014.

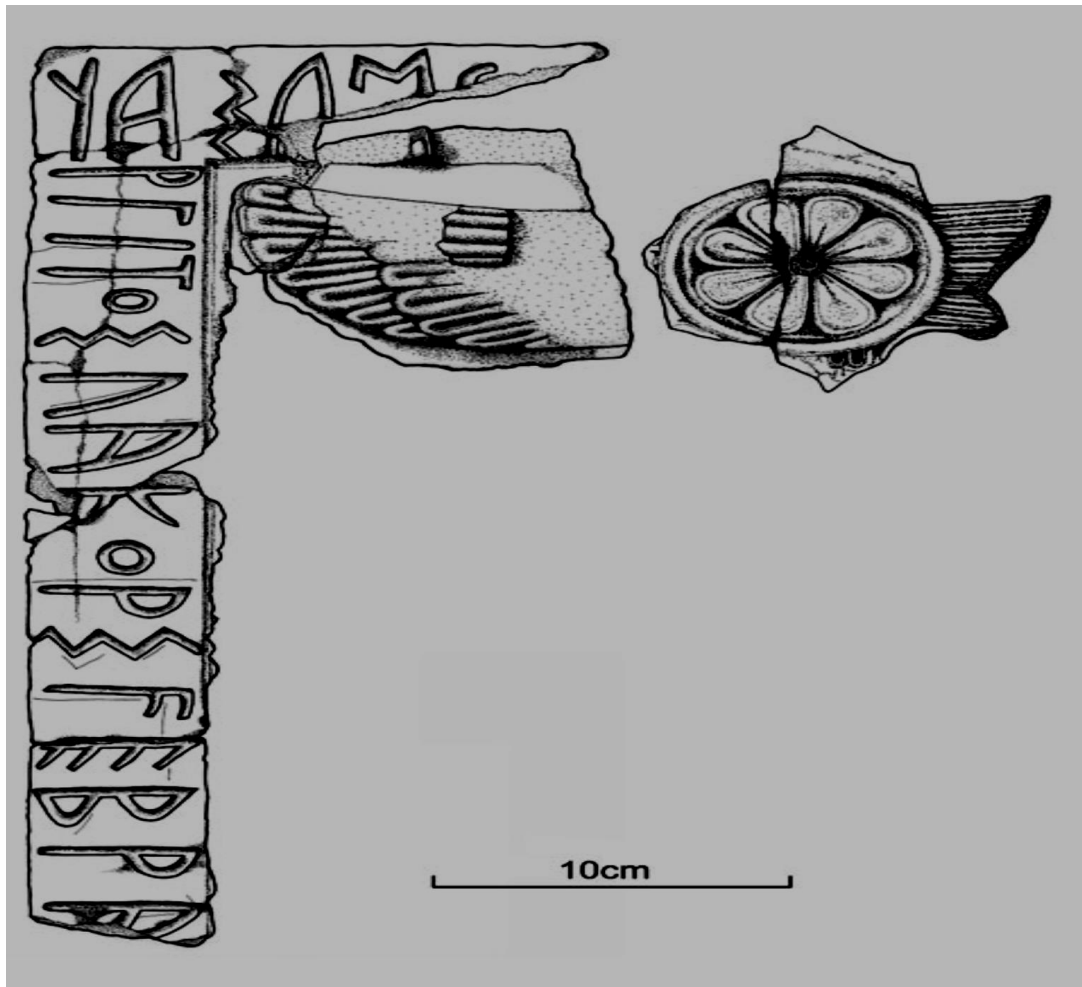


Source: Lehner, 2015, p.124

Summers claimed that (2018) Kerkenes could be identified as ancient Pteria, if this situation is correct, the destruction of the city would have been associated with the Persian invasion that was in the mid-sixth century B.C.E. (p.102) Summers (2004) argued that there is no evidence to suggest the existence of Iranian architectural traditions in public spaces and large columned halls at settlements, instead of these, the architectural practices had a relationship with the west. (2004, p.261) There is no exact information about how the city was taken. It may have been conquered by force or by capitulation. The conquering power has no intention of staying and ruling. (Draycott & Summers, 2008, p.4)

People at Kerkenes could have been Phrygian as Old or Paleo-Phrygian language is the only written language which is uncovered at the settlement until now (Summers, 2018, p.172). Summers argues that also, cult and material which came from the Kerkenes demonstrate that both the ruling elite and common people of the city was Phrygian. (Summers, 2012, p.225) However, Dusinger argues that the city could be associated with the Median expansionist state, a colonial installation at later times. (Dusinger, 2008, p.23-25) Furthermore, a different view on what purpose Kerkenes might have had and what its function has been proposed by Summers & Summers, (2013, p.150) who said that the city principal role would have been a place of refuge; therefore, it should not be seen as a focus of everyday urban activity. The city has been associated with the Hittite Mount Daha, however, before the Iron Age, there was neither an urban settlement at the site, (Summers, 2018, 167) nor second-millennium pottery or objects. (Draycott & Summers, 2008, p.2) However, some assessments are made on pottery which was excavated from Kerkenes, although the ceramic assemblage from the city is relatively small for sampling and no corpus of material from good domestic contexts has yet been excavated. (Kealhofer et al., 2010, p.75)

Figure 14 Palaeo-Phrygian inscription with small-scale relief carving from the Monumental Entrance to the Palatial Complex at Kerkenes (drawing by Carrie van Horn).



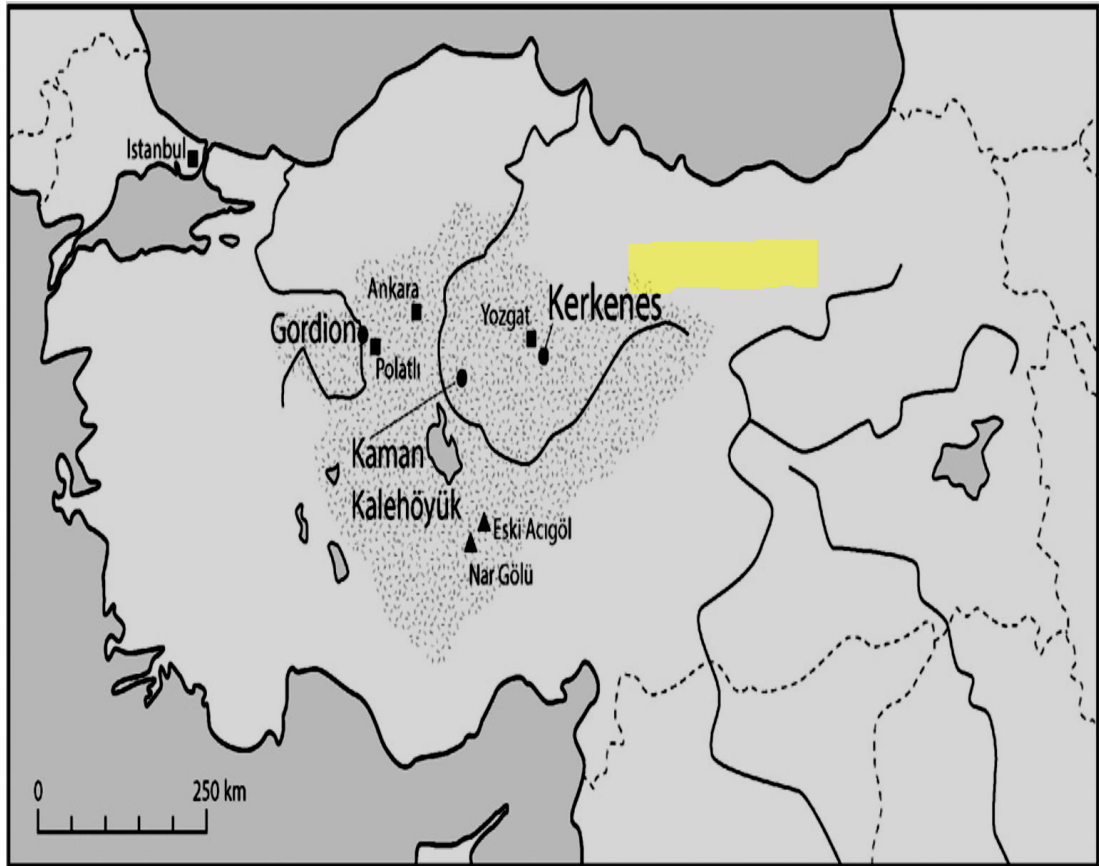
Source: Summers, 2018, p.104

Palatial Complex that has close parallels at the Iron Age rock-cut monument of Bahşeyiş in the Highlands of Phrygia, metal objects such as fibulae with strong parallels to Phrygian craftsmanship, and pottery that can be stylistically compared to Middle Phrygian pottery from Gordion. Megarons are also present at Kerkenes, though this building style has broader parallels than just Phrygia. (Branting et al., 2015, p.542)

With the above information from the Kerkenes we may suggest that the city was founded by the Phrygians in the Iron Age as a center, but its lifetime could not have been longer than Gordion, Kaman-Kalehöyük, and Boğazköy because the city did not have a long-term occupation (Summers, 2018, p.167). Unlike the mentioned sites

which had very long occupation durations, we cannot observe changes and transformations on modes and scale of production that ranges from one political entity to another. As a result of, we will be evaluating only a short period of time.

Figure 15 Location of Kerkenes



Source: Marston & Branting, 2016, p.26

3.14. Climate and Agriculture at Kerkenes

The city has different climatic characteristics from Gordion due to its altitude. The Kerkenes region has long, harsh winters and short, hot summers. Snow can continue from late November to late April in a bad year (Draycott & Summers, 2008, p.1) which could give rise to a shorter growing season. (Marston & Branting, 2016, p.27) Although the lowland plateau is hot and dry, highland areas of the eastern plateau are colder and relatively wet. Also, they have both steppe and forests alternating between

altitudes. On the other hand, Kerkenes had similar climate condition to the present one during its occupation. (Marston & Branting, 2016, p.27)

Most settlements have relied on agriculture to feed their population in ancient times. However, the variety of products could indicate alterations depending on the environment such as climate and soil type. At Kerkenes, cereals such as wheat and barley were grown more than pulse because wetter climate decreases environmental risk for wheat. Wood was used as the primary source of fuel at the city. Roughly four times more wheat was cultivated than barley. (Marston & Branting, 2016, p.29-30) This situation is astonishing because in Gordion and Kaman-Kalehöyük was more barley cultivated than wheat. (Branting et al., 2019, p.546) On the other hand, animal husbandry has not been understood properly due to bad preservation of bones, but herded animals should have had an important role in the local economy. To feed the animals, fodder has been used during the harsh and long winters. Animals like sheep and goats were used as buffer against drought and floods (Marston & Branting, 2016, p.28-29).

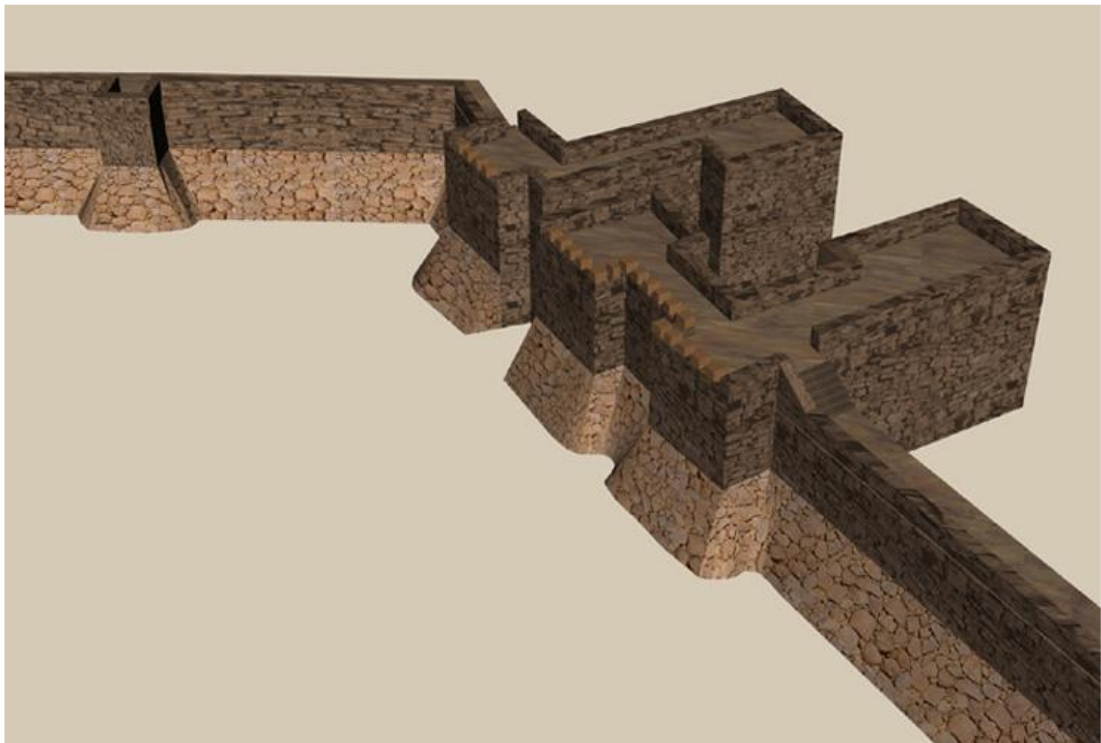
3.15. Architecture at Kerkenes

Kerkenes was a newly established settlement, demonstrating the ability to manage, organize and support a large workforce with a developed central planning control. (Summers & Summers, 2005, p.97; Branting, 2005, p.3) Kerkenes is the largest pre-Classical city in Anatolia with its 271 ha. area. The city plan provides evidence for intentional urban planning such as water management system, placement of gates, walled urban blocks and the urban layout which was composed of radially aligned compounds and streets. (Branting et al., 2019, p.540; Lehner, 2015, p.122) The city had always sufficient space for erection of further buildings without resorting to the old. (Summers, 2018, p.168). In a sense, the city was designed for longer occupation periods; therefore, it is very possible that the demise of the city was unexpected large. Stones which could have been handled by three or four men were used (Summers, 2018, p.173), suggesting mobilization of the labor force. Also, an astonishing amount of timber was used to construct the city. (Summers & Summers, 2013, p.143) “Without a doubt, the existing inhabitants of the region were coerced in some way

into providing labor, animal power, materials, and other resources for the construction of this bold physical statement of strength, permanence, and domination.” (Summers & Summers, 2013, p.143)

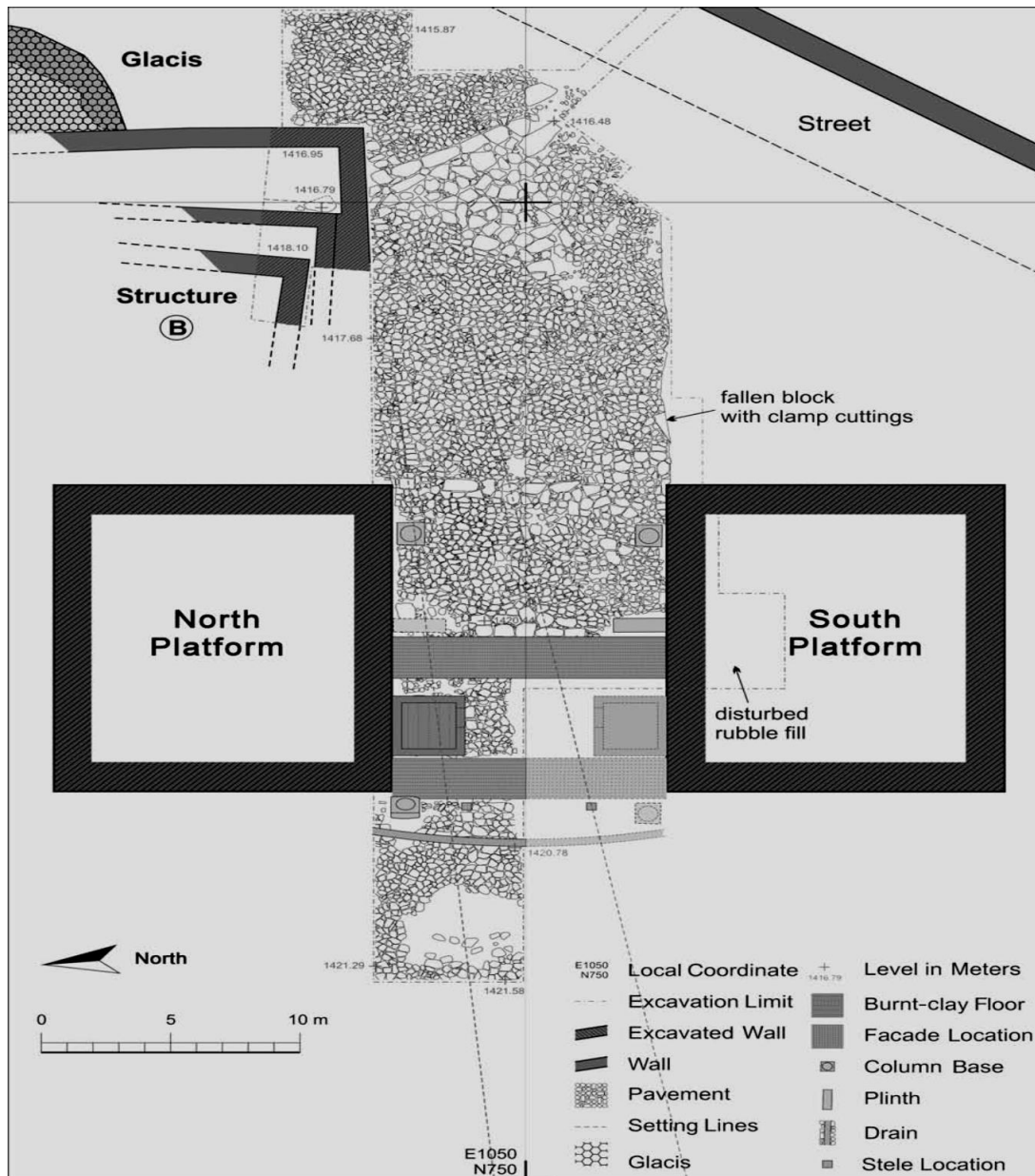
Those massive constructions are exemplary as a material extension of state power in a suitable context. (Lehner, 2015, p.125) At Kerkenes, a large area thought to be a marketplace has been identified. (Summers et al., 2001, p.11) Megaron-type house models, which are defined by hipped roof, an open front terrace and a central hearth element and accepted to be culturally related to Phrygia in Western Anatolia, were found. (Summers et al., 2003, p.451) In addition to Phrygian cultural affect, some architectures demonstrate an Iranian characteristic. (Summers et al., 2001, p.20) An elite two-room building was founded which may be an example of elite structures because the building was not designed for everyday use. (Stronach & Summers, 2003, p.129) Moreover, a complex of buildings, thought to belong to the elite population and called the palace-building complex, was also identified in Kerkenes. (Summers et al., 2003, p.453)

Figure 16 Reconstruction of the Cappadocia Gate



Source: Summers et al., 2001, p.13

Figure 17 Plan of Monumental Entrance to Palatial Complex at Kerkenes



Source: Draycott & Summers, 2008, p.cxxviii

3.16. Discussion

We have already seen that the population of Kerkenes was Phrygian and there is no occupation before the Middle Iron Age; therefore, if we want to understand the city's economic structure, we must look at the Phrygian economy first. Unfortunately, the Phrygian economy and political system are not defined clearly because there are not

enough written records. (Marston & Branting, 2016, p.27) Except for written evidence, we have archaeological findings and interpretations about that.

At Kerkenes, then, we have a new Phrygian capital of a new Phrygian kingdom. The exaggerated Phrygian-ness was... a way of maintaining an identity and a cultural purity: a Phrygian city with a Phrygian population. Kerkenes does not, in this scenario, represent a gradual eastwards extension of Phrygian culture that gravitated towards a new center; were that to have been the case, the Phrygian character would have been more diluted. The evidence is, in my view, more consistent with the idea of a mass migration, and thus, implicitly, with the creation of a new capital for a new polity. (Summers, 2018, p.115)

It is obvious that the settlement was founded by the Phrygians at a late date and the life of the settlement was not as long as the other settlements we examined in this thesis. This is exactly why we have to evaluate the site in a specific time frame. In other words, as in other settlements, it does not provide a suitable settlement example to understand the changes in *longue durée* in the economic structure.

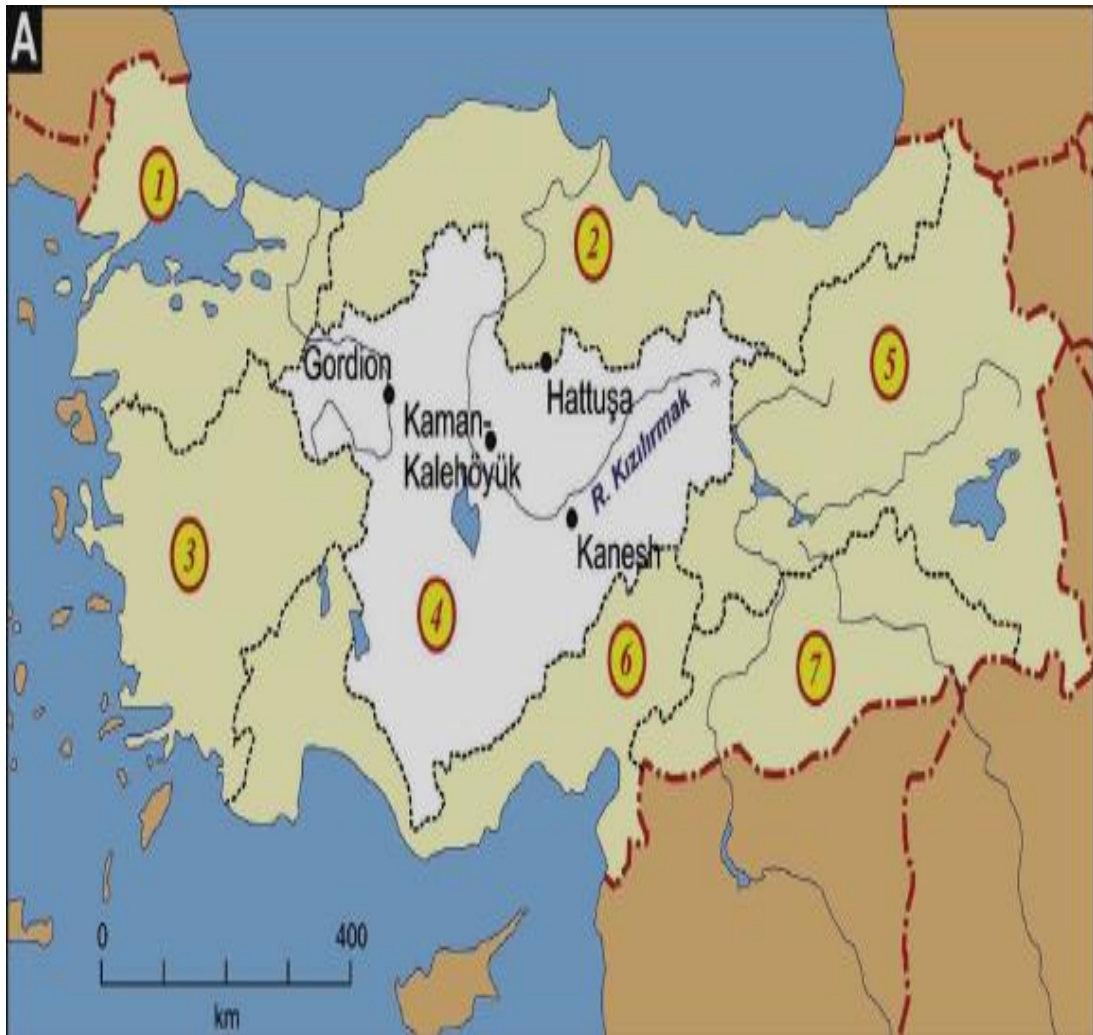
A fairly large workforce is required to build such structures, and a strong political organization should have provided this workforce; therefore, it seems reasonable to think that there was powerful ruling class to control on labour force for their own purposes. On the other hand, Summers said that “surprisingly, there is no sign for a ruling elite who was physically separated or isolated from the commoners at large; therefore, the whole population at the city must have been part of the elite.” (Summers, 2018, p.108-109)

3.17. Kaman-Kalehöyük

In addition to Gordion, there are other large settlements in Central Anatolia during the Iron Age. Most of them are not larger than Gordion in terms of economy and political power, but excavations at these sites provide substantial information to understand economy, politics, and social life in Central Anatolia during the Iron Age. One of these is Kaman-Kalehöyük which is located at the foot of Mount Baran and within the bend of Kızılırmak. Its ancient Hittite name is Maraššantiya which was at the periphery of the Land of Hatti. (Wright, 2010, p.18) There are several major rivers, Yeşilirmak,

Sakarya River and Kızılırmak in Central Anatolia, but Kaman-Kalehöyük is located in a semi-arid climate zone which meant that even a small change in climate had substantial impact on the agricultural production. (Wright, 2010, p.31) The site economy was based on mainly agriculture, and there were ample natural resources such as rich soils and watercourses. (Wright, 2010, p.103) The settlement was near the main route; therefore, it would have been easily accessible from the main sites of Central Anatolia. Gordion is located in the west, Porsuk and Kınık Höyük in the south, and Alişar, and Kerkenes, Çadır Höyük, Boğazköy in the east. (Akkuzu, 2018, p.6) The site which has a long Iron Age sequence is one of the key sites in Central Anatolia that is still being excavated (Grave & Kealhofer, 2006, p.139). Excavation at Kaman-Kalehöyük have been conducted by Sachihiko Omura Since 1986 under auspices of the Japanese Institute of Anatolian Archaeology. Kaman-Kalehöyük has long occupation sequence from the Early Bronze Age to Ottoman Empire Period. On the site, the excavation team revealed numerous architectural structures, artifacts, ecofacts, graves, silos, grain warehouses and mining workshops dating to the period from EBA to Ottoman Period. Excavations at Kaman-Kalehöyük are made in three different sectors: the North, South sector and a city wall section. (Omura, 2008: 2009: 2011: 2012: 2015: 2016: 2017: 2022) The site which is an artificial mound is 18 m. high and has a diameter 280 m. The settlement demonstrates continuous occupation from at least the Early Bronze Age III to the Late Iron Age and Hellenistic Period, despite its first occupation in the Neolithic or Chalcolithic period. (Wright et al., 2015, p.3) The mound is 1069 metres above sea-level. At the site, annual rainfall is 350 mm. which is more than enough for productive dryland farming. (Nesbitt, 1993, p.76)

Figure 18 Location of Kaman-Kalehöyük



Source: Wright et al., 2015, p.2

The settlement is suited at lower altitude at the bottom of one of the shallow valleys which must have provided underground water. However, the water level indicated an increase at the last part of the Iron Age and the Roman period. The Höyük (Mound) was surrounded by a swamp and the site was sunk into swamp water which created an unsuitable condition for settlement. therefore, people at the site must have left the settlement for drier places. (Wright, 2010, p.3) The swamp in the north of the site was likely made artificially. It could have been a canal, irrigation, or defensive structure. (Kashima, 2006, p.179) Kaman-Kalehöyük demonstrated almost a continuous occupation from Early Bronze Age to Iron Age. Kaman had begun to expand quickly

and became a walled city in the and Late Bronze Age after the swamp disappeared. (Fukuoka, 2008, p.251-262)

Table 3. The Four Archaeological Levels at Kaman-Kalehöyük

Levels	Periods	Time
Stratum I	Ottoman Empire Period (15th -17th c. A.D.)	(15th -17th c. A.D.)
Stratum II	Iron Age	(12th -4th c. B.C.E)
Stratum III	Middle and Late Bronze Ages	(20th – 12th c. B.C.E)
Stratum IV	Last half of the Early Bronze Age	(3rd millennium B.C.E)

Source: “<http://www.jiaa-kaman.org/>”

3.18. Environmental Conditions at Kaman-Kalehöyük

Today’s Kaman Kalehöyük is primarily anthropogenic. Extensive agriculture and pastoral operations dominate the region with open steppe grassland. (Wright et al., 2015, p.2) Kaman-Kalehöyük is located in modern Kırşehir (Turkey) which is in Central Anatolia. Today, Kırşehir has a semi-arid climate. Precipitation decreases

dramatically during summer, and it increases towards spring and winter. The settlement is exposed to drought during the summer. (Güneş, 2009, p.17-20) Kaman-Kalehöyük has a patchwork of agricultural lands with sporadic stands of oak, willow and poplar groves pervade areas near water sources. (Wright, 2010, p.23)

Although the excavations at Kalehöyük have continued since 1986, the paleo-environment studies were scarce. (Fukuoka, 2008, p.251) Still some assumptions and estimation about the settlement's past climate would be made. In the late Holocene, there were two extreme dry events which gave rise to outstanding lower amounts of rainfall across Central Anatolia. The first one was between 2350 BC and 1750 BC. The second one has extended from 1250 to 650 BC. After that, climate as we see today began to dominate. (Wright, 2010, p.37) By the early Holocene, oak woodland was the dominant vegetation of the region. Except from oak, pine forests had appeared across mountain zones. Cedar, pistachio, and juniper were other species for the ecological zones. (Wright, 2010, p.42) Before 1800 BP, there was a humid climate which was characterized by deposition of shallow swamp (Fukuoka, 2008, p.251) which coincided with the Middle Bronze Age. According to archaeobotanical studies, throughout the second and first millennia BC. agricultural production was an essential part of the site's economy. Bread wheat (*Triticum aestivum* L.) and hulled barley, including the six-rowed species (*Hordeum vulgare* L.), were the most important grain crops for the site. Also, einkorn wheat (*Triticum monococcum* L.) and chickpea (*Cicer arietinum* L.) were grown across the settlement. Animal dung was used as fuel and, crop products and by products were used as animal fodder. There was no substantial change in the crop repertoire and husbandry practices. (Fairbairn & Omura, 2005, p.16-17).

3.18. Economic Structure at Kaman-Kalehöyük

Under Gordion section, we saw that production is not stable which can change from one time and political organization to another. The reason behind those changes may be several. For example, an abrupt change in climate could severely affect production's amount in one time. Excessive precipitation or severe drought had major effects on land's farming practices in the past. Even in our modern developed world,

a climatic change has substantial effect on agricultural production and husbandry. Except from climate, a politic organization, which can be organized as a state, chiefdom, or a tribe, may change production's amount according to own purposes. Rulers may mobilize labor power, establish huge storages for grains and cereals, and make magnificent monuments to legitimize and retain their power. Those examples can be seen both in the past and the present over the whole world. While we are trying to understand the past's economic and social life, we benefit from history and archaeology and their sub-disciplines mostly. Written documents have priceless importance in this journey. However, they cannot be found for every period and geography; therefore, archaeology is often the pathfinder. Which archaeological finds or materials related to the economy may provide clues, and how do they indicate that? According to me, every or almost every material, commodity, or good has an economic value that determines its worth. Undoubtedly, this sentence would be accurate for our world where everything, even people, pertains to capital and money. Would this have been valid for Gordion, Kaman-Kalehöyük, Kerkenes and other settlements during the Iron Age? How did these settlements function economically? To answer these questions, we must look at the archaeological find because the written documents are very few to illuminate this era.

Kaman-Kalehöyük is a settlement dominated and ruled by Hittites from the Middle Bronze period to the beginning of the Iron Age. In Kaman-Kalehöyük existed a very colossal wall encircling a city (Fukuoka, 2008, p.251). However, the site's architecture and artefacts demonstrate that it had a modest size. (Wright, 2010, p.3) Throughout its occupation, the settlement's economy was mostly agriculture. (Üstünkaya, 2014, p.29) There was ample evidence for crop and animal production. Also, small-scale domestic industries like cloth and pottery production were made across the site. Local sources provided raw materials for these productions. (Wright, 2010, p.103) A chronological approach may clarify changes in the scale of production like agricultural, pottery, and cloth production better. First of all, Kaman-Kalehöyük is a small-scale agricultural production center which was under the Hittite Kingdom during the Late Bronze Age. (Üstünkaya, 2014, p.i) During the LBA Hittite occupation, it can be said that extensification of land use was made so as to increase grain supply. (Wright, 2010,

p.3) Archaeological assemblage provides important information about Kaman-Kalehöyük during this period. Surplus productions of grains and cereals were stored in pits as a precaution, for example drought in a bad year could cause a severely scarcity. Also, population pressure could give rise to storage to prevent famine in a settlement. According to experimental studies, underground pits are not suitable for storage for daily use. When the pits are repeatedly opened eating and germination qualities of grain degenerates; therefore, they are lay out for an extended period. (Fairbairn & Omura, 2005, p.20) At Kaman-Kalehöyük, potsherds, animal bones, and ashes were stored in pits. In the end, pits could be used as garbage dumps. (Akkuzu, 2018, p.174)

The principle of grain storage in a pit is essentially quite simple. In a sealed container, grain will continue its respiration cycle using up the oxygen in the intergranular atmosphere and giving out carbon dioxide. Once the atmosphere is sufficiently anaerobic the grain reaches a state of dormancy. Provided that the anaerobic atmosphere is maintained, the moisture content remains unaltered and a consistent low temperature which inhibits microflora activity prevails, the grain will store successfully for a considerable period. (Reynold, 1974, p.2)

Those are the most known reasons behind the storage choices in a settlement. However, pits or other storage means were used for different purposes. At Kaman-Kalehöyük, more than four thousand pits have been identified so far. (Akkuzu, 2018, p.73) Such a pit number suggests that crop production at the site was one of the economic foci of life, and the settlement was a crop production center. (Fairbairn & Omura, 2005, p.22) On the other hand, at the site, large pits have been found only in the Hittite phase despite small pits in every other level. Those large pits were associated with domestic structure, and suggested household-scale storage. (Fairbairn & Omura, 2005, p.21) In this sense, large pits indicate an anomaly in the Kaman-Kalehöyük occupation history. This demonstrates that there was an increased centralization of control over grain production which could have served as a means of supplying the Hittite army. (Wright, 2010, p.26) There could be other reasons behind building large pits than supplying the army. It could have served as a payment to the state officials.

Until now, we had used the concept of centralization of economy to emphasize the existence of a central authority at Kaman-Kalehöyük under the Hittites. According Atıcı, (2005) “centralized economies are characterized by the control of production, consumption, and redistribution of resources by a limited and privileged group of people.” (p.120) Large pits at the site are the most obvious indicator of a central authority because the Hittite rulers had direct control on agricultural productivity and distribution. Grain supply was vital for the stability of the Hittite Kingdom (Bryce, 2002, p.22) This situation became reversed in the Early Iron Age period because storage of grain took more personalized household form. (Wright, 2010, p.27) Also, large-scale architecture of the Hittite shows a centralized system at Kaman-Kalehöyük (Wright et al., 2015, p.3) When we look at the Iron Age of Kaman Kalehöyük, we don’t see any large storage facilities across the site as a result of the downfall of the Hittite Kingdom. With the Iron Age, those large pits began to disappear, and they were not replaced. Central authority during the Hittite period was not relevant to the new rulers of the region. (Fairbairn & Omura, 2008, p.22) We have discussed the views on how the Hittites ended in the previous chapters, so we don’t intend to go into the same topic again. However, data coming from the Kaman-Kalehöyük demonstrate striking information about the agricultural methods of the Hittites. Ustünkaya (2014) studied botanical data coming from Kaman-Kalehöyük, and then she established relationship between climatic conditions and agricultural management.

... a lack of effective agricultural management during a period of increased aridity may have contributed to the weakening and decline of the Hittite state rather than the deteriorating climate patterns by themselves. Especially, since it was noted that while the Hittite Empire did not manage to survive deteriorating climate patterns; the Phrygians emerged in central Anatolia during the Iron Age under even harsher conditions of water availability and yet they were successful with their agricultural management... (Üstünkaya, 2014, p.150)

After the downfall of the Hittite Kingdom in the Late Bronze Age, Central Anatolia entered into the Iron Age. There are four main architectural sub-periods in the Kaman-Kalehöyük whereas each of sub-periods may be further subdivided into several architectural layers. (Matsamura & Omuri 2008: Matsamura 2008)

Table 4 Chronological table for Iron Age at Kaman-Kalehöyük.

Period	Subperiod	Arch. Period	Chronounit
I		Ia	I
		Ib	
II	IIa	IIa1	IIa1-2
		IIa2	
		IIa3	IIa3-5
		IIa4	
		IIa5	
		IIa6	IIa6-IIc1
		IIa7	
	IIb		
	IIc	IIc1	IIc2-3
		IIc2	
		IIc3	
	IId	IID1	IId1-3
		IID2	
		IID3	
		IID4	IId4-6
		IID5	
IID6			

Source: Matsamura, 2008, p.177

The sites across the region had not been exposed to any central authority until Phrygians. To what extent the Phrygians extended over the Anatolian lands is still controversial,¹ but one thing is absolute that the Phrygians were not organized the way Hittites were. There has been already a hiatus on Central Anatolia in terms of central authority until Early Phrygian period 900 B.C.E. In this vacancy, as we saw at Gordion, wheel made ceramics that were standardized which were ubiquitous within the Hittite Empire gave place to handmade which had highly variable forms with different firing techniques. (Kealhofer et al., 2008, p.201) So far, it appears that the

¹ See the Phrygian Expansion to the East: Evidence of Cult from Kerkenes Dağ (2006) by G.Summers

EIA buildings represent domestic dwellings except from one structure on Büyükkaya in Boğazköy. There is no evidence for public buildings and actual potters' workshops for that period. (Genz, 2011, p.336-346)

First, the local range of sources for the Iron Age Kaman ceramics is large. One interpretation would be that many villages in the Kaman hinterland were producing ceramics that were exchanged with the inhabitants of Kaman (and/or around the region); suggesting a locally dispersed pattern of production. Or, if production was centralized, Kaman potters were using an exceptionally wide range of clay sources. However, clays from sources next to the site were rarely used. (Kealhofer et al., 2008, p.207)

The Middle and Late IA Black Wares were partially wheel made although the Black Wares from EIA were all handmade. (Kealhofer et al., 2008, p.202-208) Similar situations were true in other periods. For example, despite that the EBA. pottery at Kaman Kalehöyük was handmade, the MBA one was wheel made. When the firing techniques in EBA. and MBA. were compared differences could be detected. (Bong et al.,2008, p.295-309) The similarity between the two different periods or two different transitional periods is intriguing. Both eras coincide with a transitional period from domestic life and economy to a centralized one. Of course, one may further suggest that at Kaman-Kalehöyük the production amounts of pottery between MIA. - LIA. and MBA can be too different from each other because there is not much evidence for a standardized production or highly stratified society when compared with Gordion in the MIA. (Kealhofer et al.,2008, p.209) We may respond this sentence or objection, and we can say that the important thing is not the numbers or quantity, but quality. It is nevertheless premature to claim that EBA and EIA periods at Kaman-Kalehöyük shared a common identity in which each period had lived under decentralized power where no central authority related with a state, kingdom or empire in posed; therefore, people who lived in those periods produced for themselves or at confined amounts in terms of agricultural products, ceramics, and textile. In other words, their economy based on a subsistence or remained at household-level. On the other hand, when a central authority was introduced architecture, public buildings, storage means and mode of production etc. began to change gradually or abruptly.

A cluster/complex of grain silos associated with a central masonry belonging to the Hittite period is the clearest example of large-scale architecture in the Bronze Age and in the Middle and Late Iron Age several large buildings, including large crop storage structures and a megaron-like construction, are found. (Wright et al., 2015, p.3)

Wright' observation may be clear indication between political power and archaeological material.

Kaman-Kalehöyük ceramics were studied on a large scale by Kimiyoshi Matsamura. (Matsamura 2000: 2001: 2008: 2008) For Matsamura (2001), there is conservatism in ceramic production techniques, although there is a rapid change in forms or motifs in ceramics. (p.101)

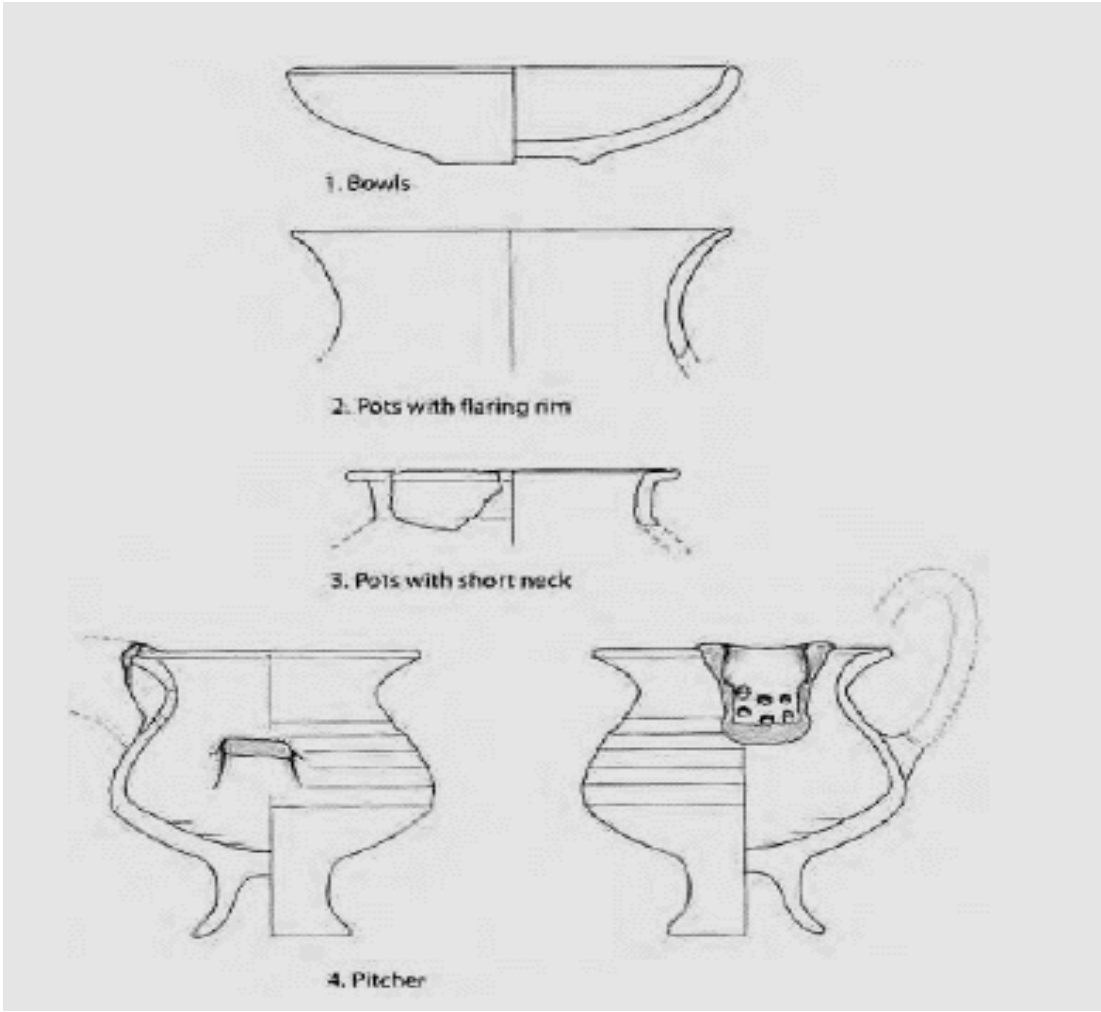
This thesis associate change in forms or motifs in ceramics with the effect of the presence of central authority. Again, as a result of a central authority, current output rises or an emulation to more powerful culture appeared. It can be claim that Phrygian had influenced the form of ceramic production at Kaman-Kalehöyük, also ceramic production indicates a rise in the MIA. (Matsumura, 2001, p.107)

The reduction firing technique is viewed as the technique that was dominant in the Phrygian. Therefore, it is interpreted that Kaman-Kalehöyük began to be influenced by the Phrygians in IIA6-IIc1. Black Lustrous Ware begins to increase in proportion in IIA6-IIc1 but increases more significantly in IIA3-5. (Matsamura, 2008, p.178)

In the Cambridge Dictionary, emulation is described as “the process of copying something achieved by someone else and trying to do it as well as they have.” At Kaman-Kalehöyük, emulation was exercised on pottery production. At the site, Iron Age elites reproduced Black Polished Wares a similar context which is known from Gordion. (Grave & Kealhofer, 2006, p.144) Even though there is much evidence for decentralized production of EIA glass in Anatolia, no clean break is seen in plant ash glass technology in the transition period from LBA to EIA (Henderson et al., 2018, p.79-80) People seem to have tried to imitate the pottery designs produced by the more technologically powerful centers in the settlement. While Middle Phrygian monochrome wares with increased, the painted vessels and animal silhouette style

which is identified with Alişar IV also existed. (Summers, 2009, p.661) This situation, again, cannot be a coincidence because the Middle Phrygian Period was the most powerful era of the Phrygians when they had an impact on Central Anatolian settlements.

Figure 19 Typical forms for Black Lustrous Ware



Source: Matsamura, 2008, p.179

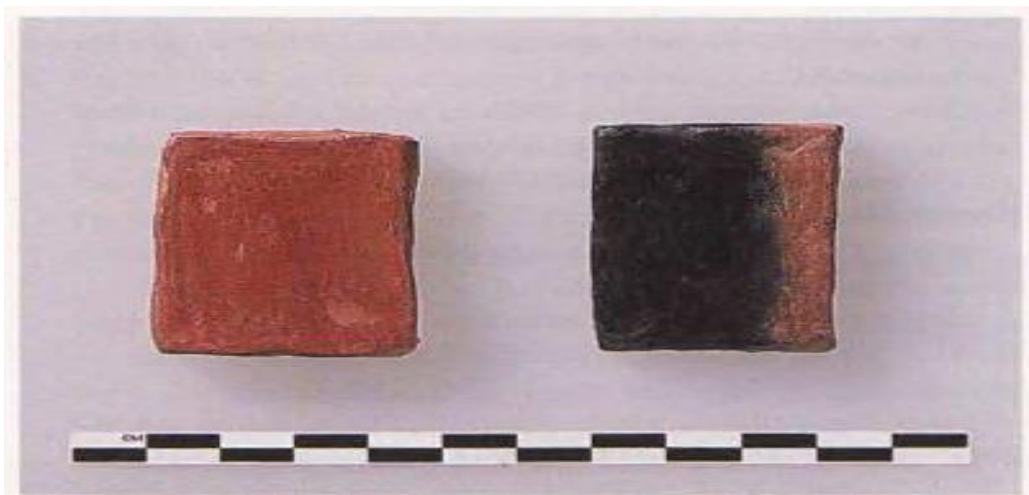
Figure 20 Fine Black Furnished Ware, refired sample and original



Figure 21 Fine Black Furnished Ware, refired sample and original one



Figure 23 Fine Black Furnished Wares, sample of firing experiment



Source: Matsamura, 2000, p.132

3.20. Çadır Höyük

Until now, this thesis investigated three sites which are in Central Anatolia. Gordion and Kaman-Kalehöyük were settled from the Bronze Age to the Hellenistic Periods; therefore, we have a chance to observe economic changes in the long term. However, Kerkenes was settled only during the Middle Iron Age, so a similar observation was not possible. In this chapter, the economic structure of Çadır through the ages and political powers will be examined.

The end of the Late Bronze Age and the end of the Hittite rule in central Anatolia is undoubtedly one of the biggest and most influential events in ancient times as already discussed above.

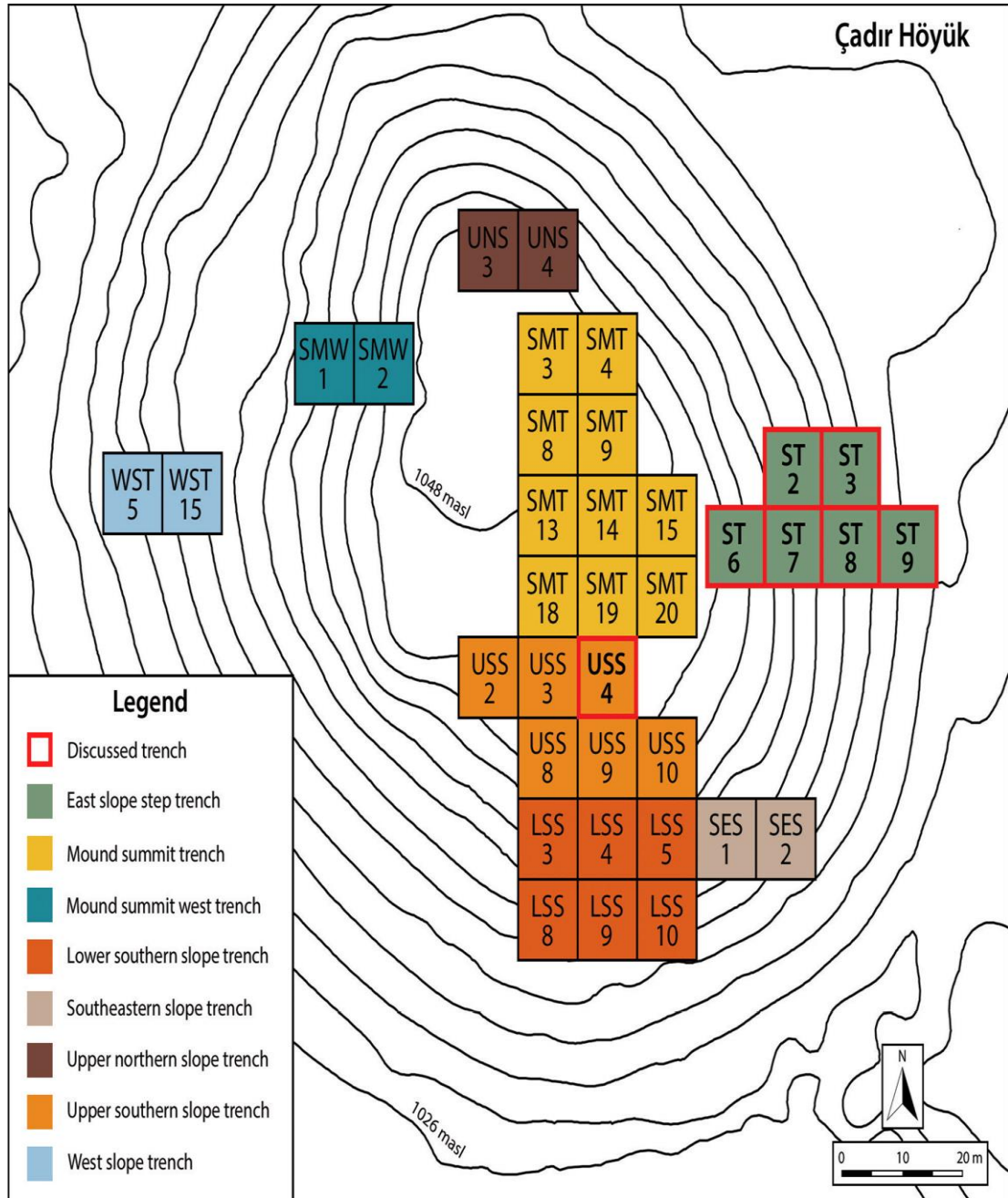
It has generally been assumed that the Hittite empire had a strong degree of political and economic centralization (for instance, collecting taxes taken in kind and redistributing animal wealth) and that after its political collapse, the empire's economic systems must have therefore collapsed as well. (Adcock, 2020, p.3)

As a result of the collapse of such a strong central authority, it is quite possible that many things have changed, and were replaced. For example, a return to household economy is highly likely because people have switched to a smaller scale structure in production as taxes collected by a central authority were no longer a burden. This proposition needs to be supported by archaeological and written sources. However, in archaeology, the data obtained may not satisfy the researchers. If also, the written sources are scarce, the situation can become inextricable. Despite all these discrepancies an opinion may be developed with the available data, and this is exactly what we have done here.

Adcock (2020) claimed that the most affected center by the Hittite collapse was the Hittite capital, and places away from the capital were less affected (p.3) Çadır Höyük is rather close to the capital of the Hittites, so it may be expected that Çadır Höyük must have been affected by the downfall of the Hittites in terms of economic and politic situations. The site was dated to 5.200 B.C.E. (Middle Chalcolithic) which is the earliest phase of the settlement, and it was abandoned by the late 11th. century

A.D. The excavation at the site began in 1993 under the aegis of the Alishar Regional Project, directed by Dr. Ronald Gorny. (Stedman & McMahon, 2015, p.69-70)

Figure 23 Topographical map of Çadır Höyük



Source: Ross et al., 2019, p.22

Table 4. Çadır Höyük's chronology

Late Iron / Achaemenid	5th – 3rd centuries BCE.
Middle Iron	900-700 BCE.
Early Iron	1200-900 BCE.
LB II-Hittite Empire/ Transitional	1400/1380-1200 BCE.
LB I-Middle Hittite	1500-1400/1380 BCE.
MB II-Old Hittite	1680/1650-1500 BCE.
MB I	1900-1680/1650 BCE.

Source: Ross et al., 2019, p.300

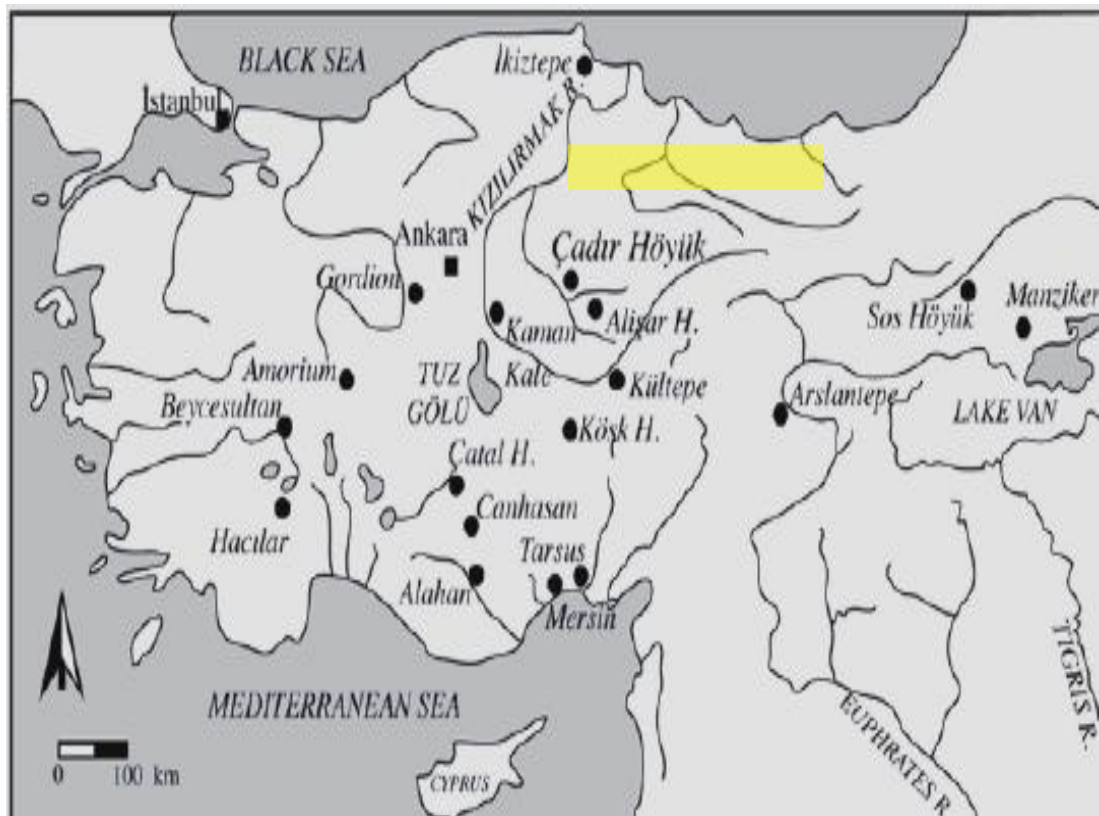
Çadır Höyük's long-term occupation from the Bronze Age into the Iron Age provides an opportunity to explore the issues of endurance and transformation experienced and engaged in by its residents through multiple stages of imperial domination. (Ross et al., 2019, p. 299)

Based on this, Çadır Höyük provided essential information about both the Late Bronze Age and the Iron Age.

For Late Bronze and Iron Age for Çadır Höyük, mostly we rely upon archaeological evidence because the Hittite texts have not been recorded at the site despite over two decades of excavation. (Adcock, 2020, p.36) Çadır Höyük is a settlement which situated in the modern Yozgat, Turkey. It rises 32m above the river valley and is 240m by 185 m. (Steadman et al., 2008, p.47). The settlement has a fertile landscape along a river valley, and it has a range of advantages such as natural resources, pasture and farmland for their residents, and potential conquerors. (Ross et al., 2019, p.299-300) It was settled from Late Chalcolithic to the Islamic periods. (Smith, 2007, p.169) Gorny claimed that the site was Zippalanda of the Hittite Period. (Gorny, 2007, p.31) The abundance of Hittite Empire remains and the depth of the Old Hittite deposits, combined with rebuilding during the Old Assyrian Period, indicated that Çadır Höyük was a significant Hittite site throughout the entire second millennium B.C.E. (Gorny,

2005, p.12) As a tribute or as part of the regional market, it could be said that rural settlements provided animals for meat to the capital. (Adcock, 2020, p.92) That assumption could also have been valid for Çadır Höyük which was a rural site during the Hittite Period. It could have had a periphery (Wallerstein’s terminology) role which supplied raw materials to the capital like meat, wool, grain etc. There could have been flow of funds from Çadır Höyük to Hattusa, Wallerstein thought otherwise. He claimed that a “politically non-unified world-economy never emerged in ancient times for the technology necessary to increase the flow of surplus sufficient to maintain it was never developed.” (Kohl, 2011, p.145)

Figure 24 Çadır Höyük’ location on the map



Source: Steadman et al, 2017, p.204

3.21. Animal Husbandry at Çadır Höyük

At Çadır Höyük, the representation of cattle and caprine was non uniform even in the Middle Hittite period. However, this situation underwent a change whereas there was a dramatic decrease in raising of cattle in the Early Iron Age at Çadır Höyük (71% caprine vs. 20% cattle). After the downfall of the Hittites, residents of Çadır had less economic incentive to continue raising those animals because there was a decreasing demand for them, and it was too costly to raise. (Ross et al., 2019, p.34) There was a dramatic decrease in the frequency of cattle at Çadır; therefore, it may be suggested that Çadır had been economically intertwined with the broader Hittite economic system. (Adcock, 2020, p.234) Also, there was a decline in the sheep to goat ratio at the site from the Hittite into the Early Iron Age; therefore, Çadır was clearly affected by the downfall of the Hittites and residents of the site indicated a reaction to changes in their economic organization. (Adcock, 2020, p.238)

Of course, the scale of this change is debatable. The economic structure of the examined period and region cannot be compared with today's advanced and highly integrated capitalist and global economic structure. However, it can be argued that during Late Bronze Age Hittite period, there was more or less economic integration between settlements in Central Anatolia, more precisely between the capital and the rural areas. This economic relationship was shaken and eventually disappeared with the collapse of the Hittites, who had an extraordinarily strong central authority in the region. With the Early Iron Age, the inhabitants of Çadır Höyük moved to both a new and a traditional economic structure. It would be appropriate to give other examples to support this argument.

3.22. Pottery Production at Çadır Höyük

When we look at the ceramic assemblage at Çadır Höyük, we might see a similar pattern as seen in Gordion and Kaman-Kalehöyük where there was wheel- made pottery production in the Late Bronze Age; however, moving into the Early Iron Age, hand-made pottery production replaced wheel-made pottery technology. The ceramic assemblage at Çadır Höyük had close similarities to assemblages from other Hittite

sites, including Boğazköy where mass-produced Hittite drab ware for wheel-made open and closed shapes existed (Ross et al., 2019, p.308)

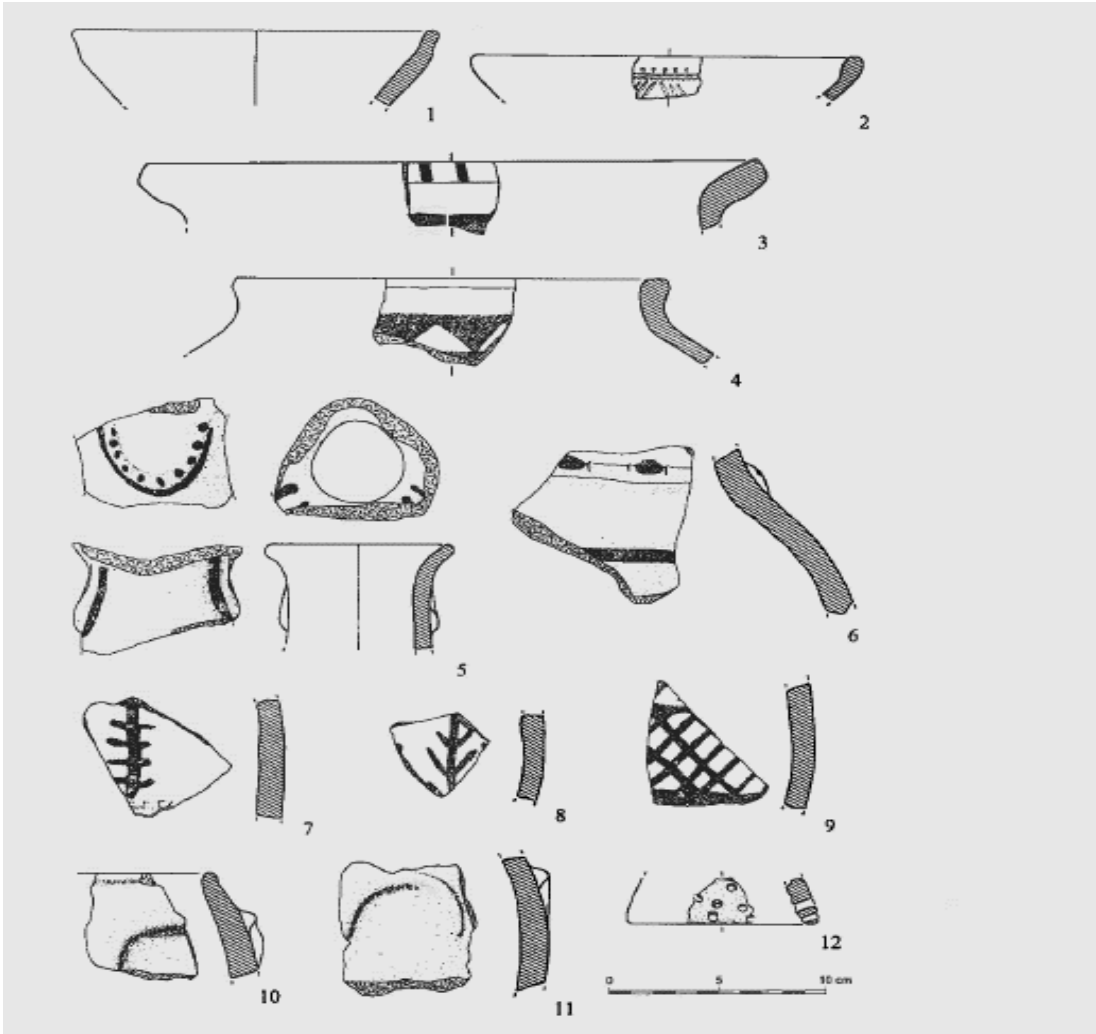
On the other hand, Genz (2001) said that although it could have been established in a specific Iron Age context at Çadır Höyük, there is unstratified Iron Age pottery that only is dated from other sites. (p.159) Step Trench, which is an excavation area at Çadır Höyük, revealed a significant amount of standardized Hittite drab ware that is wheel-made and undecorated, and these represented just over 50% of sherd finds from the Late Bronze Age levels. (Ross et al., 2019, p.26)

There are both handmade and wheel-made vessels, also indicative transformations in the production methods and producers during this transitional phase. The pottery coming from Early Iron Age strata is primarily handmade with occasional wheel finish. (Ross, 2010, p.70-71)

Moving into the Early Iron Age, the larger assemblage is dominated by handmade forms. With larger forms, thicker walls, and coarser fabric most of small forms were hand-made. (Ross et al., 2019, p.29-30) When the site enters the Early Iron Age, there was a dramatic decrease in the number of wheel-made vessels, however, the wheel production never entirely disappeared. (Ross et al., 2019, p.310) With the Hittites losing their influence in the region, the inhabitants of Çadır Höyük moved to a self-sufficient economic structure and resorted to a traditional method while doing this. With the downfall of the Hittites, the residents of the site returned to a more traditional and efficient method of production. Also, ceramic technology at Çadır Höyük indicated long-term continuity and they relied on local resources and traditional ways of doing and making things. (Ross et al., 2019, p.308) It seems that there was a significant change in ceramic production. The method of ceramic production has changed, and the residents of the settlements have abandoned wheel-production, which evokes mass production, and have started to prefer handmade pottery that resembles household-economy. Moreover, although the Hittite authority showed itself in Çadır Höyük, people did not forget their traditions from the past and as soon as the central authority disappeared, they resorted to traditional methods that have been going on for many years.

Until now, we have explained changes from Late Bronze to Early Iron Age. We saw that a shift which is from centralized or semi-centralized economy to de-centralized one took place at Çadır. When we come to the Middle-Late Iron Age, unfortunately, there is no abundant evidence to make a solid interpretation. However, a few things can provide clues regarding about the production methods of Middle and Late Iron Age. The MIA assemblage is predominantly wheel-made and Late Iron Age ceramics have many of the same characteristics as the MIA assemblage. There is some evidence which suggests trading because some of these assemblages are of non-local origin or at least from outside of the Çadır catchment. (Ross, 2010, p.74-76)

Figure 25 Early Iron Age Pottery from Çadır Höyük



Source: Genz, 2001, p.167

Figure 26 Ceramics from various periods: (a)–(b) Hittite Empire; (c)–(e) Late Bronze Age–Iron Age Transitional; (f)–(g) Middle Iron Age; (h)–(i) Late Iron Age.



Source: Ross et al., 2019, p.309

Finally, another mode of production we should mention at Çadır Höyük is textile production. There is also evidence of textile production in Çadır Höyük. (Ross et al., 2019: Ross, 2010: Ross et al., 2019)

3.23. Discussion

What we observed at Çadır Höyük is quite similar to what we observed at Gordion and Kaman-Kalehöyük. In the Late Bronze Age, with the increase of Hittite dominance in Central Anatolia, there was a significant change in the production relations in these settlements. A potter's wheel, indicating mass production, was used in all three settlements and the method of production was determined by mass production. The most important factor in this is undoubtedly that production was shaped in line with the demands of a central authority. Likewise, we see a similar effect in animal husbandry and agriculture. With the end of the Hittite domination, economy generally took on a household-centered structure and societies produced just enough for themselves. This situation has been observed with both the pottery production and the changes in agriculture and animal husbandry. With the Middle and Late Iron Age, there was a remarkable increase in production again. We see the most vivid example of this in Gordion. Although traces of a similar change can be seen in Çadır Höyük, unfortunately there is not as much data as in Gordion and Kaman-Kalehöyük. However, such an interpretation can still be made in the light of the available data. The emergence of the Phrygians, who replaced the Hittites, can be shown as the reason behind such an increase. In other words, it is observed that production starts to increase again in line with the demands of a central authority or a politically and economically powerful class. Of course, this situation may differ in terms of quantity with the production in the Hittite period. However, the similarities in terms of quality appear as an indisputable fact. If we talk about Çadır Höyük, the Middle and Iron Age data are scarce compared to other periods, but it is highly likely that the view put forward in this thesis will be supported by future studies.

9. Boğazköy

After the downfall of the Hittite Empire ca. 1180 B.C.E., an historical account of events on the Anatolian plateau becomes untenable. For over a century there are no known written records by any people living in Anatolia. (Beal 2011: 596)

Written sources are substantial in attempt to understand the Hittite world, and there are mostly five sites provided ample examples; these are Boğazköy, Maşat Höyük, Ortaköy, Kuşaklı, Kayalıpınar. Most of cuneiform archives of are related with ritual subjects, and there is not much information about economic and commercial life. (Genz & Meikle, 2011, p.13) As a result of that, we have to rely on archaeological evidence and material to understand the economic and commercial life.

Büyükkale (Great Fortress) is a settlement in Boğazköy (Hattusa) which was used as capital (Gates, 2015, p.204) by the Hittites. The settlement is located at modern Çorum in Turkey. However, it was a less prominent site in the Iron Age.

Boğazköy clearly was less important than Gordion, and the same picture of small regional centers comparable with Bogazköy seems to be typical for the rest of the region inside the Kızılırmak bend with such sites as Alişar Höyük, Maşat Höyük, Kaman-Kalehöyük and others. (Genz, 2011, p.336-337)

The settlement is situated at several large rock outcrops, a watered canyon, and several laying plateaus watered by natural springs. (Lehner, 2015, p.105-106) Boğazköy is excavated for the first time by 1893-94 Ernst Chantre, and respectively by Winkler and Makridi (Mielke, 2011, p.1032) Puchstein and Kohl, Kurt Bittel (1952-1977), Peter Neve (1978-1993), Jürgen Seeher (1994-2005), and Andreas Schachner (2006-...) (Mielke 2011: Lehner:2015) Boğazköy is a massive settlement, and some sections provide continuity from the Late Bronze to the Iron Age (Mielke, 2011,p.1034) therefore, we chose this sites as another example to understand economic transformations from a powerful central authority to disappearance of it. Büyükkaya, which is a settlement in Boğazköy, provides an excellent opportunity to reveal a continuous and well-documented stratigraphy from the Late Bronze with intact Early Iron to Late Iron Age deposits. (Lehner, 2015, p.107) For the Early Iron Age, domestic architecture is dominant in there, so we may say that there was a continuation in settlement patterns. There is no evidence for public buildings and fortifications until

now. Only one structure was identified as a workshop for bronze-and iron smithy. (Genz, 2011, p.336 quoted from Sheer 1997) Generally, hardly any evidence for metal smithy in the Middle and Late Iron Ages in Central Anatolia has been found so far (Genz, 2011, p.352)

Table 6. Definition and dating of Iron Age phases at Boğazköy

<u>Local Designation</u>	<u>Dating (abs.)</u>	<u>Dating (rel.)</u>
Dark Age	12th-10th centuries BC.	Early Iron Age
Büyükkaya Stage	9th century BC.	Middle Iron Age
Büyükkale II-Stage	9th-8th centuries BC.	Middle Iron Age
Büyükkale I-Stage	7th-6th centuries BC.	Late Iron Age

Source: Kealhofer et al 2009., p.280

If we look at the animal husbandry, Driesch & Pöllath (2002) said that “cattle, sheep, and goats were the most numerous domestic animals and there is almost no difference in the frequency of occurrence in these three species categories between the Late Bronze Age and the Early Iron Age.” (p.295) The variation was observed only in equids and pigs’ faunal finds. (Driesch & Pöllath, 2002, p.295-297-299) This observation is very interesting for us because there is no substantial difference in the frequency of occurrence in those animals although there was a transition from centralized settlement to de-centralized one, and frankly speaking, this situation is contrary to what this thesis expected. Because cattle, as we have seen, was an animal associated with central authorities. The absence of a strong central authority in the EIA could have brought about a significant reduction in the numbers of these animals, but

the results were not. On the contrary, there has been an increase in the number of almost all domestic animals.

Table 7 Animal Species identified on Büyükkaya

Species	Late Bronze Age	Early Iron Age
Horse and mule	18	95
Donkey	7	4
Cattle	1640	2371
Sheep	579	674
Sheep/Goat	2401	3372
Goat	154	346
Pig	119	402
Dog	23	53
Total domestic mammals	4942	7317

Source: Driesch & Pöllath, 2002, p.296

3.25. Pottery Production at Boğazköy

As we mentioned before that, The Hittites was one of the most influential powers in the Near East. This central authority managed and controlled production.

The distribution of Hittite-type pottery indicates a powerful regime which already in the early period was able to create a kind of common material culture over large stretches of central Anatolia... a clear trace of a state organization with centralized control of the production and distribution of goods. (Seeher, 2011, p.386)

With the 16th century B.C.E, there was a decline in the quality of the pottery. They had simpler shapes, poorer manufacturing, and less decoration. There was mass production of undecorated the pottery. (Seeher, 2011, p.386) After the downfall of the Hittites, Hattusa was settled by the new settlers. They were line in organized colonists. They were farming communities and were self-sufficient. The city had water sources, ruins

which provided building materials, and fortifications for protection, when the new settlers came to the settlement. (Seheer, 2010, p.222) When the Hittites or central authority disappeared a Boğazköy, pottery production changed in both quality and quantity. Use of wheel, and Hittite forms disappeared quickly. (Kealhofer et al., 2009, p.277). On the other hand, Kealhofer & Grave (2011) claimed that there was some continuation between the Late Bronze Age and Early Iron Age in ceramics manufacturing traditions. (p.420)

At Büyükkaya, EIA ceramics were found, wheel-made ware made up to 31% of the pottery in the older phase, but in the two following phases it dropped to 8% and 4% respectively and the Hittite traditions were imitated at the site with distinctly better-smoothed surfaces. (Seheer, 2010, p.223) Rather than wheel-made pottery, individually manufactured home-made pottery came into prominence once more. (Seheer, 2010, p.226)

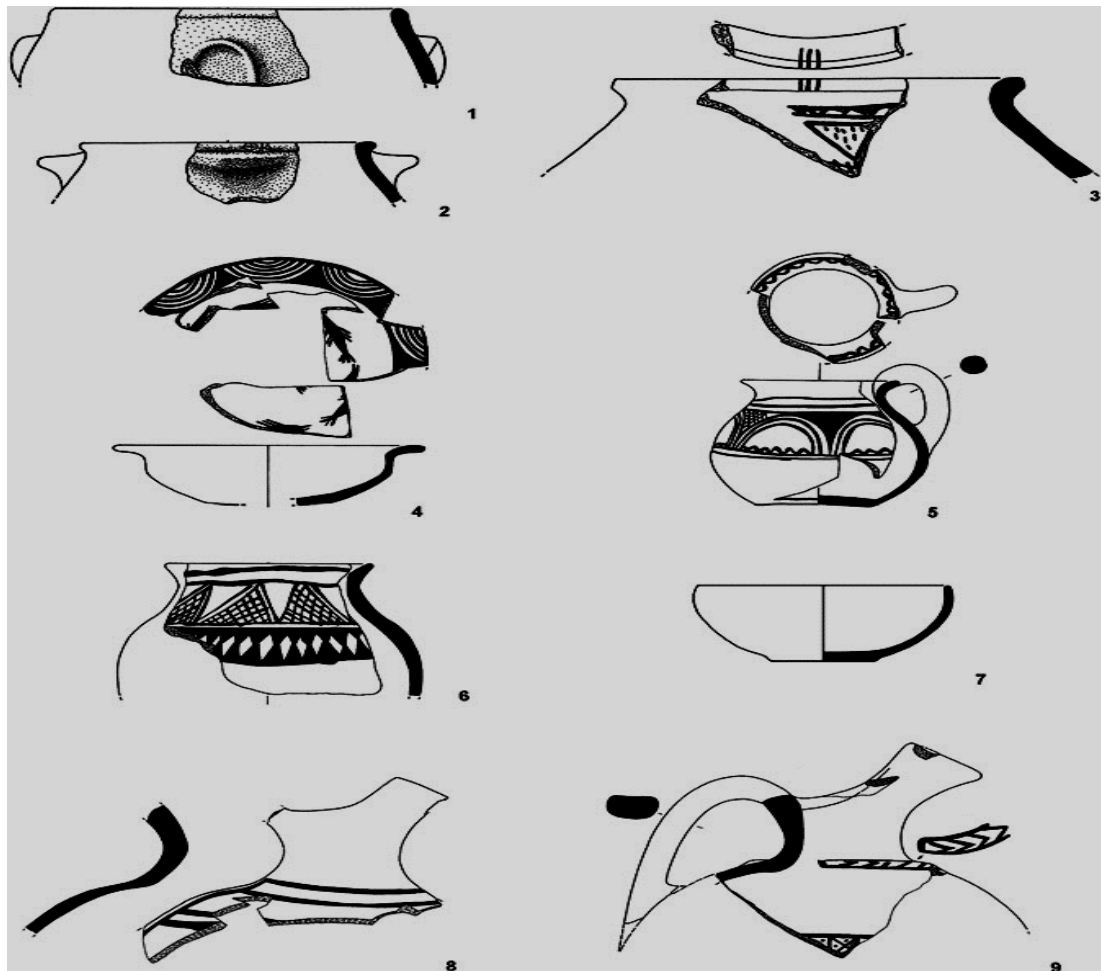
With the MIA (10th and 9th century onwards) the potter's wheel reappeared in Central Anatolia. (Genz, 2011, p.346) When we look at the Middle Iron Age, the settlement grew considerably again. With the MIA, potter's wheel was used. There are two distinct ceramic zones in Central Anatolia. Gordion is in the west, Boğazköy, Maşat Höyük and other sites are in the east with painted pottery, and animal motives etc. (Genz, 2011, p.336-349) Of course, someone might say that the use of the potter's wheel may not indicate the existence of mass production here, because we may not know to what extent the production has changed in terms of both quantity and quality. In other words, using the potter's wheel alone may not make sense to understand the changes in production. This objection is a very reasonable criticism. However, the use of the potter's wheel gives us an important perspective on a significant change in production.

Subsequent work on the Northwest Slope of Büyükkaya revealed a sequence of LIA deposits in Büyükkale (Kealhofer & Grave, 2011, p.420). However, there is no reliable evidence for the absolute date of the LIA (Genz 2004: 139) There was a marked shift in Boğazköy in terms of settlement. The Lower City and Büyükkale were abandoned,

and places new settlements were established at other sites. The hill was encircled by a fortification, and the buildings became larger with multi-rooms. (Genz, 2011, p.341)

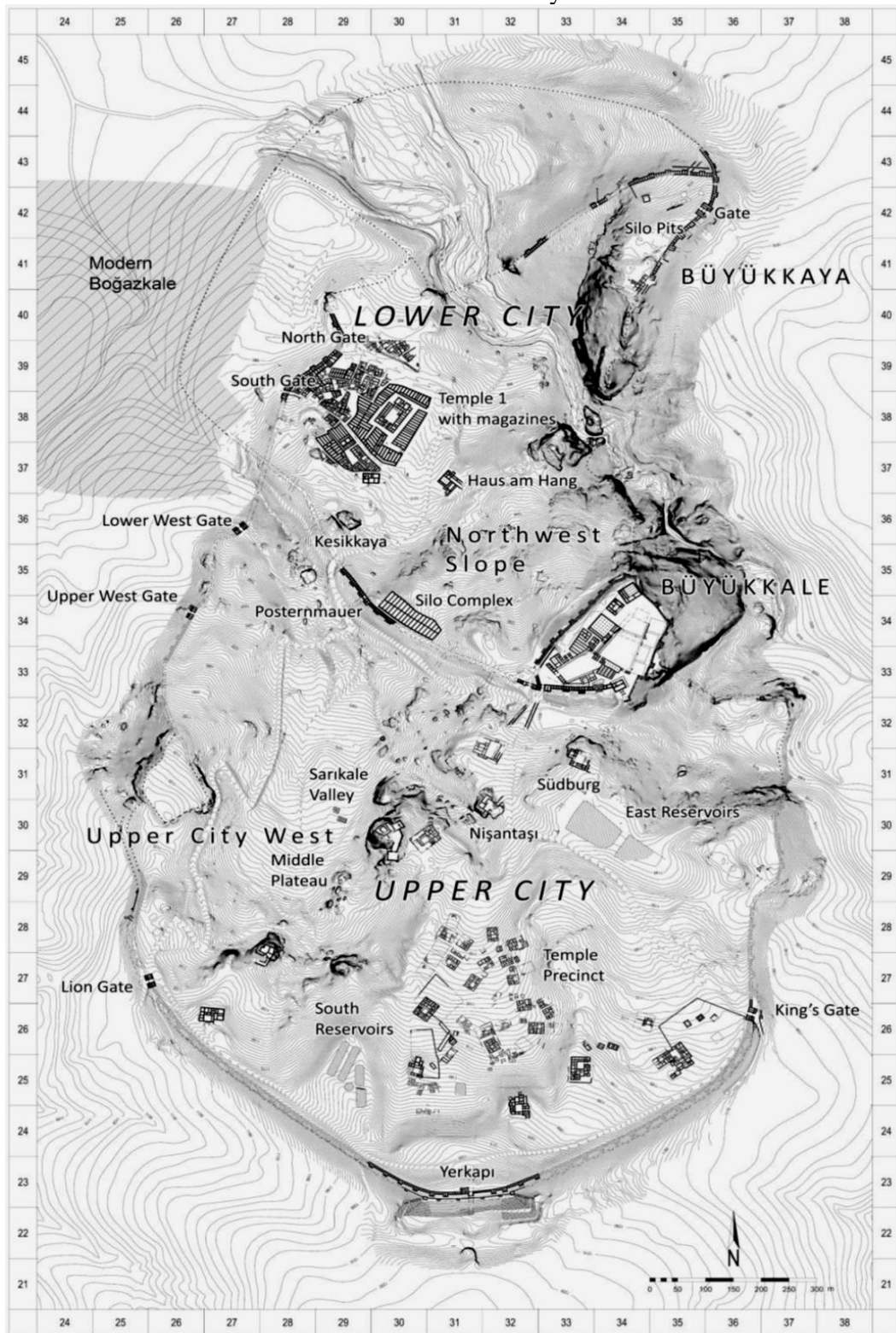
According to Genz (2004) said that the pottery assemblage gave an homogeneous date in the LIA at namely Büyükkale I. (p.147) There could have been similarities in the material assigned to the Büyükkale I period at Boğazköy to the pottery from Alishar V, and to the material from Kerkenes Dağ, and Gordion YHSS 5. (Genz, 2004, p.142) With the light of this information, we may estimate that there was a close relationship between those sites which were in Central Anatolian. At least, we can say that it could be an emulation to each other.

Figure 27 Iron Age pottery from Büyükkaya and the Northwest Slope. Nos. 1–3 EIA



Source: Kealhofer et al., 2009, p.281

Figure 28 Map of Boğazköy with emphasis on the Late Bronze Age. Note most recent excavations at the Lower City are not shown here.

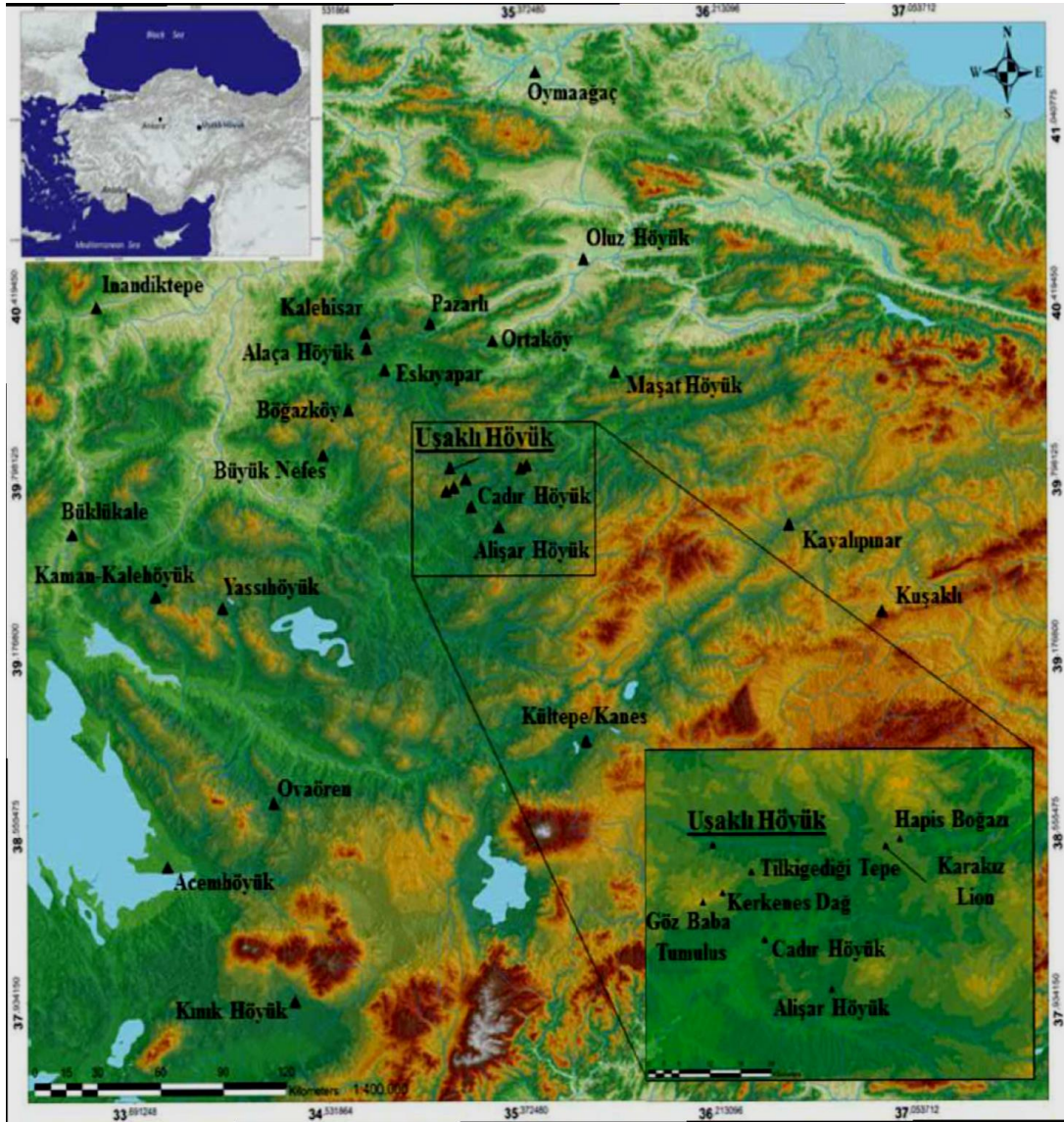


Source: Lehner, 2015, p.109

3.26. Uşaklı Höyük

Uşaklı Höyük, which is near to the city of modern Yozgat, is right in the middle of Central Anatolia, and this site is most likely located within a regional system of communication routes that has continuously developed through history. (D'Agostino, 2019, p.32) Uşaklı Höyük has a strategic position for communication routes linking Cappadocia with Pontus, eastern and western Anatolia, and nowadays Ankara with Sivas, and Kayseri with Corum. (Mazzoni et al., 2019, p.58) The distance between the Hittite capital Boğazköy/Hattuşa and the Uşaklı Höyük is a little more than 40 km. In the south-east of Uşaklı Höyük, Alişar Höyük is situated, and Kültepe/Kanis is in along the North-south route. From Uşaklı Höyük to the top of the Kerknes Mountain takes almost seven km. (Corti, 2010, p.193-194) It can be said that Uşaklı Höyük and Kerkenes Mountain may see each other without any obstacle and must have provided an important reference for the journeys between Central Anatolia and Cappadocia throughout history, also being an intersection point of Uşaklı Höyük played a substantial role in the clarification of the function and importance of the city. (D'Agostino, 2020, p.50) The site consists of a 10 ha. terrace and a mound rising on its southern side to 1138 m. (Mazzoni et al., 2019, p.58) Uşaklı Höyük is in an affluent area for water sources such as The Kanak Su basin and its tributary and the Eğri Öz Dere. (Corti, 2010, p.193) In addition to spring waters, there are fertile plains, which is 1100 meters above sea level, across the site. (Orsi, 2020, p.271) Therefore, the site is favorable for agriculture, woods, and pastures which could have provided diversified activities during ancient times. (D'Agostino, 2020, p.70). Its clear position led scholars to assume the höyük could be sacred '*Zippalanda*' city. (D'Agostino, 2019, p.34, Mazzoni et al., 2014, p.258)

Figure 29 Uşaklı Höyük' location



Source: D'Agostino, 2020, p.84

Uşaklı Höyük's strategic position and proximity to other well-known settlements such as Hattuşa, Alishar Höyük, and Kerkenes attracted the attention of scholars. First, E. Forrer (1926) and H.H. Von der Osten (1927) studied Uşaklı Höyük, and then Geoffrey and Francoise Summers conducted some surface surveys in the frame of the Kerkenes Project in 1993-1994 (Mazzoni et al., 2010, p.109). During these studies, Uşaklı Höyük given by different names such as Kuşaklı, Uçaklı, and

Kusachakly, but Uşaklı Höyük has been preferred for this site. (Mazzoni et al., 2012, p.317). After a long gap, Uşaklı Höyük has been researched by a team at the University of Florence since 2008. (Mazzoni et al., 2010: 2011: 2014: 2017: 2019: D'Agostino, & Orsi 2015, Mazzoni 2012) Archaeological excavations have revealed a long sequence of occupations from the Early Bronze Age until the Byzantine periods. (Orsi, 2020, p.271) the site reached peak of occupation in the Byzantine period, and then the plain and hilltops were used by farms and tumuli. (Mazzoni et al., 2012, p.319)

Uşaklı Höyük reached its maximum extent in the second half of the 2nd millennium, and the settlement became a significant city for the Hittites. (D'Agostino, 2020, p.70). The site's most productive phase in the Middle-Late Bronze and Iron Ages coincided with the Hittite-Phrygian periods and excavations revealed parts of two monumental Hittite structures, one a temple in the lower city and the other a place in the Acropolis. (Mazzoni, 2016, p.42) Although there is no clear evidence to indicate the location of city walls, some pieces of fortification walls are interpreted as city walls. (D'Agostino, 2020, p.54) In the Late Bronze Age, new official and monumental structures were constructed in Uşaklı Höyük. Building II and Building III were most likely concrete expressions of the power of the élite. (D'Agostino, 2020, p.71-72) In other words, official or high-status architecture took place on the site. (D'Agostino, 2019, p.5) The pottery assemblage in Building III is characterized by a large percentage of the wheel made. (Mazzoni et al., 2017, p.72) The Hittite' institutional buildings, temples, and palaces might compare with the building techniques, architecture, and style of the stone-working in Uşaklı Höyük. (Mazzoni et al., 2019, p.61) Although an irregular and meandering street network, drainage channels, road pockets, and few squares are found, it is tough to get a concrete idea of the architecture in the residential areas. (D'Agostino, 2020, p.48) In this sense, it is hard to determine a settlement model for Uşaklı Höyük because only a minimal part of the site has been excavated now; however, it can say that the settlement has typical urban features. (D'Agostino, 2020, p.58)

The Hittite structures should belong to the LBA because findings regarding the settlement between the 3rd millennium BC and the first half of the 2nd millennium BC

currently consist only of surface and secondary context. Archaeological layers belonging to these periods have not yet been unearthed. This situation is also valid for Iron Age, which was documented by pottery recovered in secondary contexts. (D'Agostino, 2019, p.36) As a result, there is not much evidence to track earlier occupation of the site except a few hand-made Cappadocian." painted sherds dating from the Early Bronze Age to the Middle Bronze Age. (Mazzoni, 2012, p.95) These sherds help scholars to establish a relationship between Uşaklı Höyük and other sites in Central Anatolia. For example, red slipware sherds from the Middle and Late Bronze Age demonstrated parallels with types found in stratified MBA-LBA sites in Central Anatolia. (Mazzoni et al., 2014, p.257) In addition to architectural remains, six cuneiform tablet fragments containing festivity, ritual, and prophecy texts connected to a legend, Hittite stamp seals, were found; therefore, the site could play an important administrative and political role within the scope of the Hittite imperial order. (Mazzoni, 2016, p.43)

The political, economic, or social changes in the transition from LBA to IA in the plateau has not been well understood, and information about the relationship between different societies is minimal. (D'Agostino, 2019, p.40) However, as we saw in former sections in this thesis, in the Late Bronze Age, Central Anatolia witnessed enormous catastrophic events, population movements, and wars. We investigated what could be the reasons behind these events in former chapters. In the LBA, Uşaklı Höyük was also exposed to destruction, and some areas bear traces of fire. (D'Agostino, 2020, p.76-80) With the collapse of the Hittites in Central Anatolia, locally produced wheel-made pottery forms a standardized repertoire in shape and size, of low quality, without any painted or carved decorative elements disappeared. Instead of wheel-made and standardized ceramics, a new repertoire of painted or unpainted hand-made ceramics began to permeate. (D'Agostino, 2019, p.37) Ceramic assemblage dating to LBA was characterized by mass-produced wheel-made plain ware with profiles and treatments characteristic of the Late Empire production. (D'Agostino & Orsi, 2015, p.169) The transition from wheel made to hand-made pottery can be a common trait for sites in Central Anatolia in the transition from LBA to IA because the Hittite domination and its political authority disappeared at the end of the LBA. When a central power which

pushed or persuaded people to produce surplus production collapsed, people could have turned to household production.

Figure 30 Building III. The melted floor of room 59



Source: D'Agostino, 2020, p.87

3.27. Iron Age at Uşaklı Höyük

Because of modern agricultural disturbances and erosion, Iron Age pottery assemblages do not demonstrate specific concentration in any area. (Mazzoni et al., 2010, p.95) Excavations made until 2020 did not provide Early Iron Age occupational layers. Still, the presence of a set of potsherds indicates some similarities with Early Iron Age North Central Anatolian ceramic assemblages, which makes researchers think the settlement was occupied during the early phases of the Iron Age (Orsi, 2020, p.280). In Iron Age, it is observed that there was engraftation over ceramics on the site. South and west Anatolia's culture affect the area. (D'Agostino, 2019, p.40) For example, excavations have revealed black-painted sherds (Alişar IV type) and polychrome sherds dating to the Middle and Late Iron Age. (Mazzoni et al., 2012, p.95)

A few general comparisons with the western area are also visible. From the technological point of view, for example, a connection is visible in the reducing firing atmosphere, common at Uşaklı and typical of Gordion Early Iron Age dark-faced, handmade ceramics and, maybe, in the use of slab building technique. Morphologies are substantially different, but some similarity is nevertheless perceivable. (Orsi, 2020, p.288)

Even though it is so hard to determine with indeed the extension of the Uşaklı Höyük in the transition from LBA to IA, Uşaklı Höyük's size was reduced at the end of the LBA, and the site was characterized by a small village or hamlet in Early Iron Age. (Orsi, 2020, p.294) Being a hamlet or small village of a settlement in Central Anatolia in EIA could be expected because the Hittite Empire collapsed, and a significant economy collapsed. In this thesis, we saw that people at Gordion, Kaman-Kalehöyük, Çadır Höyük, and Boğazköy turned to household level production in EIA.

Ceramics in IA indicated handmade forming technique, which is the distinctive central aspect of the ceramic assemblage. (Orsi, 2020, p.281) The same situation is valid for Uşaklı Höyük because pottery production was organized on the household level rather than industrial production. (Orsi, 2020, p.295)

3.28. Discussion

Uşaklı Höyük is a relatively new excavation project when compared to other sites such as Gordion, Kaman-Kalehöyük, and Boğazköy; therefore, layers in the settlement are not well-established. Also, data coming from the site cannot compete with other settlements; therefore, we try to avoid from defiant interpretation. However, we may argue that at least ceramic production lost industrial character in the transition from LBA to IA. When Uşaklı Höyük entered Early Iron Age, wheel-made ceramic left its place for handmade. Production remained at the household level. In LBA, the Hittite central authority had a catalytic role in ceramic production. In other words, rulers' demands must have increased production beyond the household-level demand. When central authority or orders of political rulers who have pushed or persuaded people to produce surplus production disappeared, people began to adopt the self-subsistence production model. In the settlement pattern, Building III (an official building of Hittite officials) was not rebuilt by its inhabitants or by those who caused its downfall.

(D'Agostino, 2020, p.74) People did not need an official building. All in all, the transition from LBA to IA in Uşaklı Höyük demonstrates similarities with Gordion, Çadır Höyük, Kaman Kalehöyük, and Boğazköy in terms of the change from wheel made ceramic to handmade or from industrial production to household-level.

3.29. Kınık Höyük

The destruction of the Hittites was a watershed in the history of Anatolia. The effects and results of this destruction may not have been felt in the same way in every region of Anatolia. Until now, we tried to investigate how the downfall of the Hittites changed Central Anatolia in terms of politics and economics. We mentioned what kind of a process commenced in Central Anatolia after the political and economic collapse of the Hittites, who had established a solid central authority in Central Anatolia, and what kind of changes occurred in the economic structure of the region.

Figure 31 Kınık Höyük' location



Source: www.kinkhoyuk.org

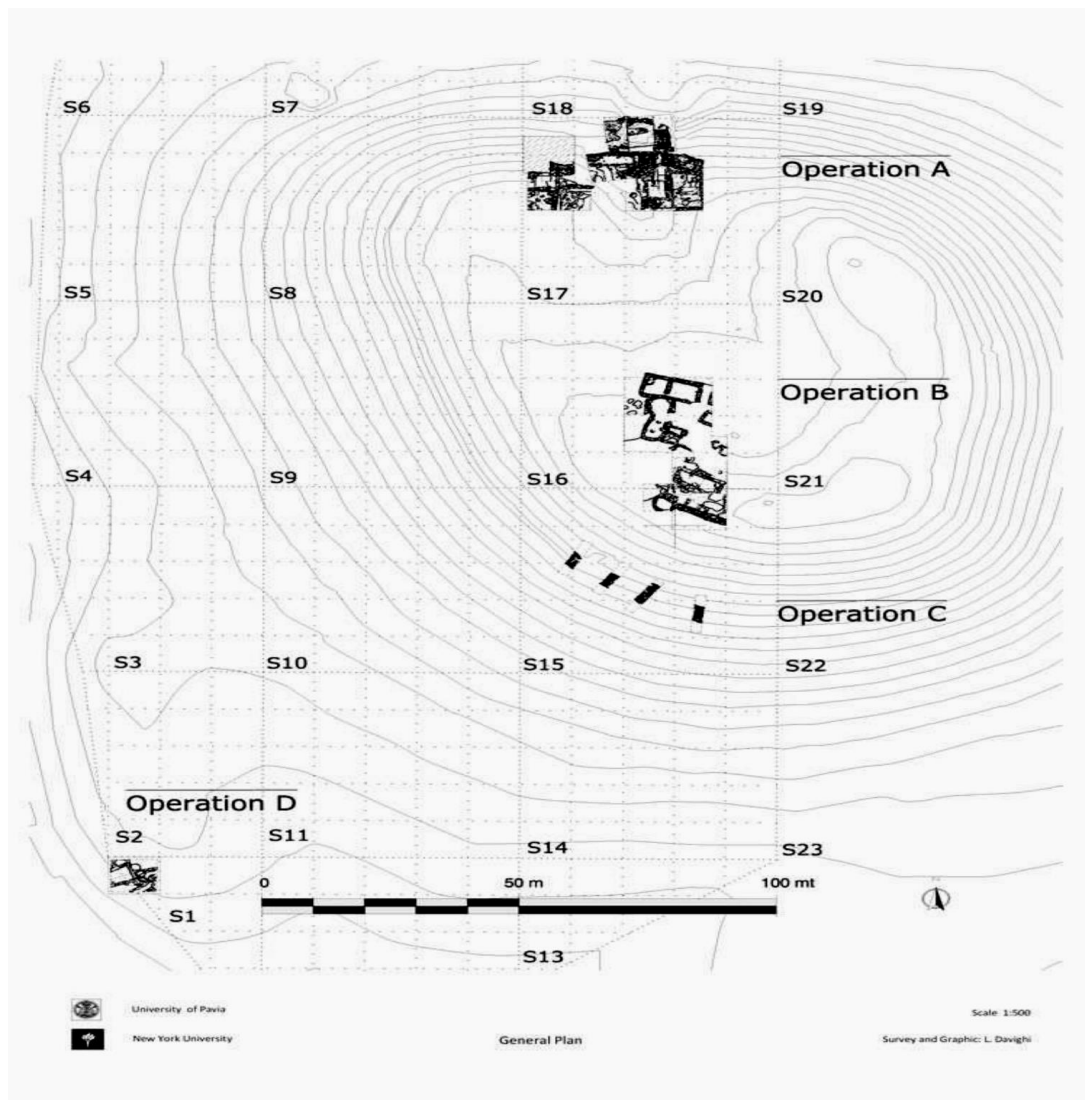
Kınık Höyük is in Southern Cappadocia which is in south of Central Anatolia. Thirty-seven sites are detected in the region dating from the Late Neolithic- Chalcolithic

period to the Middle Ages. Twenty-four of these sites are classified as hamlets. (Balatti & Balza, 2012, p.95) However, Kınık Höyük had a vital role among these sites in connecting Central Anatolia to the eastern regions (Cilicia, Syria, and Mesopotamia) (Cinieri et al., 2014, p.2) The area is in the provinces of modern Niğde and (partially) Konya. There are Taurus and Ulukışla mountains in the south of this region. Melendiz, Hasan, and Karadağ volcanoes situated in the north and northwest. (Balatti & Balza, 2012, p.93) The Southern Cappadocia was one of the most important routes connecting Anatolia to the Levant. The region was used for trade and military aims until the seventeenth century. In the south of this region are the Taurus mountains give controlling access into Anatolia. However, until the last decades, this region has not been investigated in detail concerning other areas of Anatolia. (D'Alfonso, 2012, p.387) Generally, this region is described as culturally backward, hardly urbanized, and scarcely populated. (Balatti & Balza, 2012, p.93) Kınık Höyük was discovered by Merrigi in the 1960s during surveys. (Ergürer, 2016, p.298) After a long gap, a joint American, Italian and Turkish excavation project began in 2011 in the Kınık Höyük. (D'Alfonso, 2012: D'Alfonso & Gorrin, 2014: 2015, D'Alfonso et al. 2015: 2016). In addition to the University of Pavia, the Kınık Höyük excavation project is supported by New York University, ISAW Institute. In addition, cooperation is carried out with the Department of Geology of Niğde University for paleo-geography research. (D'Alfonso & Işıklı, 2012, p.15; Mora & D'Alfonso, 2012, p.391)

Kınık Höyük consists of a 20m high mound with a diameter of 180m. It is roughly a large and square-shaped hill. The center of the settlement was the summit of the mound and the terrace parts. However, the surveys carried out around the mound show a lower city of approximately 24 hectares. (D'Alfonso & Işıklı, 2012: D'Alfonso, 2012: D'Alfonso & Gorrin: 2013) Kınık Höyük is in a great location in terms of water resources. (Lanaro et al., 2015, p.63) Also, there are fertile agricultural lands across the region. (Castellano, 2018, p.261) On this fertile land, barley, wheat, millet, lentil, pea, bitter vetch, einkorn, and grape were cultivated both in LBA and IA in the Kınık Höyük. (D'Alfonso & Highcock, 2014, p.120-122) In addition to agricultural activities, animal husbandry occupies a crucial place. The sizeable domestic animal assemblage (about 94%) was sheep and goats. The remaining collection is cattle, and

pig bones is not founded. Caprine consists of the large domestic mammal assemblages (80 %) during Late Bronze Age and Iron Age. (D'Alfonso & Highcock, 2014, p.119-120)

Figure 32 General plan of Kınık Höyük 2014



Source: D'Alfonso & Highcock, 2014, p.100

The settlement is situated in the temperate steppe forest zone of Anatolia. Modern Niğde has precipitation under 350 mm/year, and July, August, and September are the hottest months. The most rain falls in autumn, but the region can be exposed to the heaviest rainfall in spring. (D'Alfonso & Highcock, p.120)

Table 8 General Periodization of Kınık Höyük

KH-period	Conventional period	Date
KH-P 0	Modern	Modern
KH-P I	Seljuk/Early Ottoman	1200-1450 CE
KH-P II	Late Hellenistic	200-1 BCE
KH-P III	Achaemenid-Hellenistic	500-200 BCE
KH-P IV	Neo-Hittite and LIA I	800-500 BCE
KH-P V	Post-Hittite (EIA and MIA I)	1200-800 BCE
KH-P VI	LBA	1500- ? BCE

Source: Castellano, 2018, p.262

There were seven periods of occupation at Kınık Höyük. The site had been settled continuously from Late Bronze Age to the end of the Hellenistic period. (D'alfonso et al, 2016, p.599). After the Middle Ages, the site was used neither for agriculture nor something else. (Balatti & Balza, 2012, p.96) Balatti and Balza argued that the primary occupation in the site concurred with the Early and Middle Iron Age (12th – 8th century B.C.E.) and in these periods, impressive structures were made, such as rock reliefs, monumental hieroglyphic inscriptions, and steles which were made under the auspices of a small Neo-Hittite kingdom, the Kingdom of Tuwana (the Hittite Tuwanuwa) (Balatti & Balza, 2012, p.97). Iron Age architecture on the site was mainly composed of one-room houses made of mud brick on a stone foundation. Also, worship activities may have taken place (Ergürer, 2016, p.299). According to written and archaeological evidence, the Assyrians, Phrygians, Cimmerians, and Lydians controlled the Kingdom of Tuwana. However, extensive future research will clarify this point. (D'alfonso & Ergürer, 2014, p.327)

The Hittites controlled Central and Southern Anatolia in the Late Bronze Age. At this time, Kınık Höyük, which was some 400 km. south of Hattuşa (Boğazköy), part or at

the edge of a province of the Hittite empire named *the Lower Land*. (The Kingdom of Tuwana) (Cinieri et al., 2014, p.6) However, when the Hittite Empire collapsed, these regions entered a different political and economic situation. In detail, we examined the transition from the Late Bronze Age to the Iron Age in Central Anatolia. However, we will discuss whether Kınık Höyük experienced the same fate as other settlements.

First, Mora and D'alfonso (2012) claimed that “it is evident that Cappadocia was exposed to a less disruptive process of cultural and social change than the two northern areas around Gordion and Hattusa.” (p.393) In this sense, Kınık Höyük’s position can be crucial to figure out the dichotomy of continuity and discontinuity after the downfall of the Hittites. There was a discontinuity in terms of economy and politics in Gordion, Kerkenes, Kaman-Kalehöyük, Çadır Höyük, Uşaklı Höyük, and Boğazköy. People at these sites turned to household-economy from a centralized economy in the Early Iron Age. We tried to associate these changes with the presence of central authorities. On the other hand, Kınık Höyük may be separated from these sites in terms of continuity in economic activities. Castellano claimed that the form of the political economy inherited from the Hittites has continued to survive in the former eastern and southern peripheries of Anatolia after the downfall of the Hittite empire. (Castellano, 2018, p.260)

Data from Kınık Höyük and its vicinity...allows the authors to revise, at least partially and for some archaeological sites, the political scenario following the fall of the Hittite Empire, usually seen as the consequence of a complete socio-economic and cultural collapse and military destruction. (Balatti & Balza, 2012, p.97)

Storage facilities and pottery production may give some insight into production mode and production relations. This thesis is going to mention storage facilities and pottery production to understand Kınık Höyük’s economic structure from LB to IA.

Public storage facilities dating to the eleventh to tenth century B.C.E. (Castellano, 2018, p.272) continued in the Kınık Höyük after the Hittites collapsed in Anatolia. These storage facilities indicated that there were Hittite local administrations in the vicinity of Kınık Höyük. (D’Alfonso et al., 2016, p.601 cited from Mora-D’Alfonso

2012). The presence of storage facilities in the Iron Age can imply the centralization of agriculture.

Rulers at the site may have taken surplus production from commoners and used these storage facilities as the Hittite rulers did. Agricultural products were controlled by the lords of Tuwana, which was one of the essential socio-political entities of Southern Cappadocia during the Iron Age. (Balatti & Baza, 2012, p.101-102) Centralized storage also appears as a crucial feature of Early-Middle Iron Age northern Syria and southern Anatolia, both in the economies of those polities and in the rhetoric of the self-celebrative program carried out by their rulers. (Castellano, 2018, p.278) The presence of central authority in the Kınık Höyük, as in the Hittite period, provided control of agricultural products and the storage of these products for long-term purposes. Rulers may have aimed to extract and accumulate large quantities of agricultural products. In other words, agricultural production was beyond of household level. People may have produced for both themselves and their rulers. Rulers may have pushed or persuaded people to work for own purposes. Apart from agricultural activities, pottery production might demonstrate some signals about economic structure in the transition from LBA to IA at Kınık Höyük. During the excavations lot of pottery is dated to both LBA and IA was unearthed (D'Alfonso 2012: D'Alfonso & Gorrin 2014: 2015, D'Alfonso et al.,2015: 2016). We were considering the literature; therefore, this thesis associates using the wheel with the central authorities' presence. Until now, we saw that there was a profound change in quantity and quality in the Early Iron Age of Central Anatolia. People at Gordion, Kaman-Kalehöyük, Çadır Höyük, Uşaklı Höyük, and Boğazköy had substantially left using the wheel for ceramic production when the Hittite Empire collapsed.

Figure 33 The locations of some places mentioned in this thesis on the map



Source: <https://www.historyfiles.co.uk/>

Hand-made ceramics substantially took the place of wheel-made ceramics in the EIA at those sites. On the other hand, in Kınık Höyük, there was no indication of discontinuity in pottery production between the LBA and IA. People at the site continued to use the wheel to produce ceramics. Also, there was no apparent change in the technology used in the ceramics firing technique. (D’Alfonso et al., 2016, p.601 cited from D’Alfonso 2010)

Not only the Kınık Höyük but also the Southern Cappadocia share the same similarity about continuity after the downfall of the Hittites. LBA and IA sherds gathered during

survey in Southern Cappadocia were collected on the slopes of the Hasan and Melendiz Mountain. Still, their fabric originated a long way from where they assembled. In this sense, a complex territorial organization in pottery production survived after the downfall of the Hittites. (Mora & D'Alfonso, 2012, p.392-393) Pottery production was beyond the household level; that is, there was mass production of ceramics. These continuations are not limited to economic activities. Apart from the economic activities, Southern Cappadocia showed a certain significant continuity from the Late Bronze Age in terms of material culture, script, and iconography. (Balatti & Balza 2012, p.97) Especially there was continuity in the kingdoms of Tarhuntassa and the Tuwana (Southern Anatolian Plateau) (Mora and D'Alfonso 2012: Lanaro 2015).

... Hittite traditions, literary and artistic forms, and official and administrative titles might have converged in the cultural heritage and fused together with new stimuli in a tireless exchange, in continuous enhancement and constant overlapping, which, ultimately, is nothing more than the construction of culture. (Balza & Mora, 2011, p.429)

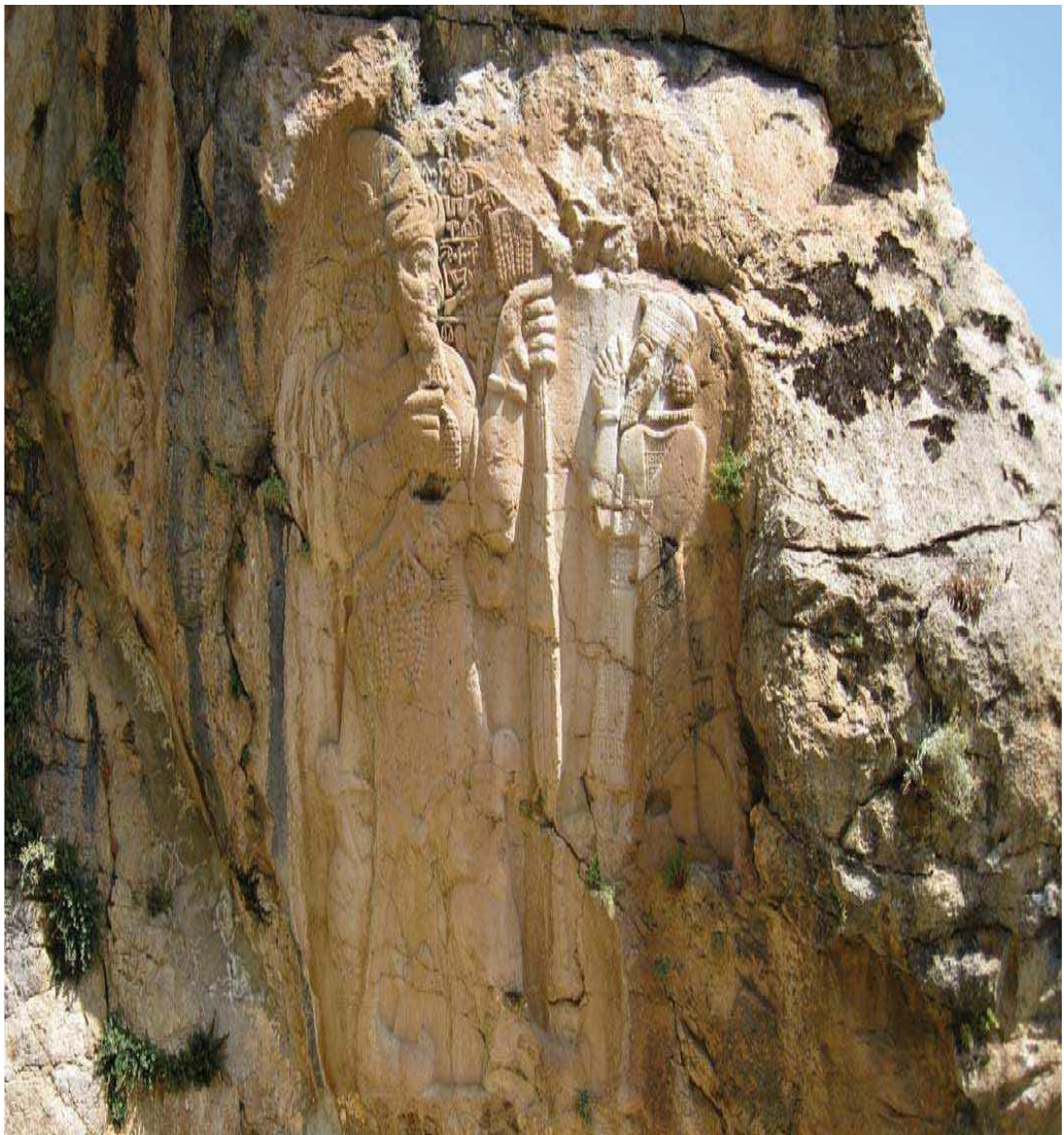
EIA walls in Kınık Höyük were rebuilt on the LBA walls. There was a continuity from LBA to IA, although the construction technique of the walls indicates some changes from the Hittite. Also, defensive walls demonstrate that the site was not a tiny village or hamlet, but it had a developed urban organization. (Ergürer, 2016, p.300-301) Under the Tuwana Kingdom, some rock monuments continued to be made, which show Hittite features in the vicinity of Kınık Höyük. Especially in the territories of Malatya and Carchemish, stone monuments were continued to be built. (Lanaro, 2015, p.92-93)

3.30. Discussion on the Kınık Höyük

Kınık Höyük indicates a very different process compared to other sites mentioned in this thesis. First, there was continuity in the economy, political organization, production, and culture in the transition from LBA to IA. Wheel-made technology in ceramic production continued to be used. The site did not lose its urban character—something observed at other places in this thesis. After the downfall of the Hittite

Empire in Anatolia, economic and cultural breaks occurred in Central Anatolia. However, there was no break in Kınık Höyük; on the contrary, there was continuity. According to this thesis's argument, continuity in production may explain the presence of central authorities, just as we attribute the ruptures to the absence of the central authority. In other words, central authorities played a catalyst role in production. These political powers have forced or persuaded people to produce beyond their own needs and use surplus products for their purposes.

Figure 34 İvriz Relief



Source: D'Alfonso & Işıklı, 2012, p.18

Figure 35 Middle and Late Iron Age Painted Wares and later Painted Wares



Fig. 13: Middle and Late Iron Age Painted Wares (a-c); later Painted Ware (d).

Source: Mazzoni et al., 2014, p.266

Figure 36 Red Slip Burnished and Drab Wares



Fig. 14: Red Slip Burnished (a-c) and Drab Wares (d).

Source: Mazzoni et al., 2014, p.266

CHAPTER IV

DISCUSSION

In the first part of the thesis, we tried to explain and understand the theories on the ancient economy with the hope that general assessment of the theories may be helpful in interpreting the conclusions in the thesis. As we mentioned before, efforts to understand the economies of ancient times date back to the nineteenth century. According to the Substantivist view, which is the earliest of these, ancient economies did not resemble today's capitalism neither in quality nor quantity. They had their own economic structure, and they were generally self-sufficient based on the household level. In fact, in Finley's words, the concept of economy did not even exist, this concept covers only the modern times. Trade was not developed because it was quite risky. There was trade that included luxury goods only in line with the demands of the elite or ruling class, and it did not resemble either quantitatively or qualitatively the highly complex and global trade that took place in the modern times. The concern for status and the ethical values of the society did not allow the economy to emerge as a separate field.

The view of Modernism, which is the exact opposite of this view, claim that the economies of ancient times were like today's capitalist system in terms of quality but differ only in terms of quantity. What can be considered as the common point of both views is that they evaluate the ancient or pre-modern economies under a single model. We can argue that the discipline of archaeology was not engaged in these theories. They have benefited from mostly anthropology and history. Most of the inferences were made based on ancient Greece and Rome, and societies in other geographies and different time periods of the past were ignored. Of course, these are only models for

understanding the economies of ancient times, but in our opinion, they are very influential models with important shortcomings.

In addition, we introduced the thoughts of Max Weber and Karl Marx, respectively. As described before Weber believed that economic activities in pre-modern societies lack 'rational' as in modern capitalism. They have also traded, saved money, and pursued profit, but they are not qualitatively similar to what is done under capitalism. There was trade, but it was not long-term and continuous. There was an accumulation of money, but these were not aimed at a continuous accumulation of capital as in capitalism. Consumption-based needs were at the forefront rather than production. The rational economic mentality pre-modern economic system was completely different than today's modern economy and that free labor was not in pre-modern economies and therefore it was different from capitalism. In addition to these, we have included more contemporary view, which can be found in following pages.

So, what do the above-mentioned theories and views say about the field and period studied in this thesis? The answer is both everything and nothing. Frankly, it emerges from the settlements we examined in this thesis that each period has brought with it a new economic structure. We can describe it as follows: In the Late Bronze Age (the Hittite's strongest period in Central Anatolia), there was mass production of pottery, overexploitation of agricultural land, significant variation in animal husbandry (not found in every settlement), taxation to feed various government officials, in short, it was quite complex. However, in the Early Iron Age, a self-sufficient economic structure based on household economy in almost every settlement included here is observed. This situation will change again in terms of quality and quantity in the Middle and Late Iron Age, and production will surpass the household level.

Not all settlements examined in this thesis provide the same level of data. According to the available data, the climatic, and environmental conditions and production modes of the settlements described have been tried to be given. The climatic and environmental conditions of some settlements in the examined period are deliberately included in the thesis because when we examine these areas in the *longue durée*, it has

been observed that there are changes in the production style and amount. It is important for us to understand the conditions under which these changes occurred; rather what kind of reasons lead to such changes. According to the “New Archaeology”, people have created their cultures by reacting to environmental factors, population pressures, and changes in competition with adjacent settlements. In other words, people are in a passive state and as long as there is no change in objective conditions (such as environmental factors), they sustained their own cultural practices which inherited from the past. While it is evident that the climate and environmental factors discussed in this thesis have undergone certain changes, it would be a bold statement to claim that these changes are significant; therefore, it may be more reasonable to attribute the fluctuations in production to shifts in the region’s political structure rather than environmental and climatic factors.

Despite the household economy of the EIA, there was an economic structure that went beyond the household level in the Middle and Late Iron Age, especially as we saw in Gordion. We may attribute the reason for this not to environmental and climatic conditions, but to the Phrygian state which was an important power in Central Anatolia at that time. In other words, we can say that there were significant changes in production in line with the demands of a central and sovereign power. We have made a simplification when we have examined Central Anatolia by looking at only seven of settlements, of course, to describe this region, which may be considered quite extensive geographically, in every detail, is something that requires expertise beyond what the author of this thesis can do.

In addition to the selected region, the time also covers a very long period of time from the LBA to the LIA is considered. Some settlements have provided us with relevant information or data, while others do not. The *longue durée* concept adopted in the thesis has advantages as well as disadvantages. The common point of most of the settlements examined in the thesis is that they had an economic structure beyond the household level during the LBA. In other words, there was mass production in pottery and surplus in agricultural production in line with the Hittite rulers and sovereign powers. Overproduction in ceramics may have been used in commerce. We have

already said that grains were kept in large storage areas. With the disappearance of Hittite domination from Central Anatolia, there was an economy based on household level in Gordion, Çadır Höyük, Kaman-Kalehöyük, Boğazköy, and Uşaklı Höyük. During the EIA, people at these settlements probably had a self-sufficient economy, and that situation, together with the establishment of a solid central authority by the Phrygians, where Gordion was used as a center, there was an economic structure based on mass production, especially in ceramics. Gordion clearly indicated how much the agricultural lands and livestock activities have increased. We clearly see how a central authority has changed the mode of production and its relations. The production has turned into something beyond the household economy and people have started to produce beyond their own needs from a certain moment in time. In this sense, this situation can be interpreted as the effect of central authority on the production.

Furthermore, it should be noted that the center and periphery relations mentioned in the World-System Analysis cannot be applied to the Iron Age Central Anatolia based on the available data in this thesis. No one deny that Gordion was an important center during the Middle Iron Age, but its centrality must be more cultural. For instance, the ceramics produced in Gordion were tried to be produced in the same style in other settlements. Gordion' pottery production style should have affected other settlements. It can be said that there was an emulation of other settlements (especially in Kaman-Kalehöyük) to Gordion in pottery design. Otherwise, there was no such thing as a constant flow of resources to Gordion. Gordion was a center, but other settlements did not seem to be in the periphery that constantly flowed their resources into Gordion. Another point we observed while writing this thesis is that people did not easily give up their habits from the past. For example, traces of ceramics in the EIA Çadır Höyük can be traced back to the Early Bronze Age. Following collapse, the hegemony of a dominant power is over (the downfall of the Hittites), people at Çadır Höyük have continued their culture, which was rooted in their memories and went back a long time. In other words, they could be very conservative their daily life. As Neo-Evolutionist claimed “humans sought to preserve a familiar style of life unless they were compelled to change by forces that were beyond their control.” (Trigger 2008: 390) Although

this situation could not be valid for each settlement, it can be seen some examples in this thesis.

It would be useful to place particular focus on Kınık Höyük. The site seems to have entered a different historical process compared to other settlements which investigate in this thesis. The region to which this settlement belongs could not escape the influence of the central authority, as in other settlements. For this reason, it seems that there was no return to household economy that we saw in other settlements and mass production continued as in the LBA. Undoubtedly, the role central authority could be crucial role. Such an authority must have forced people to beyond their needs.

All in all, the remarks are as follows: The economy of Central Anatolia seems to have been mainly based on agriculture from the LBA to IA. Mainly wheat, barley, and various legumes were produced by considering the characteristics of climate, topography, in short, environmental conditions. Such an agriculture-based economy did not seem to have changed with the emergence of central authorities. What has changed is the scale of production and beyond the household level, that is, beyond a self-sufficient production. Surplus productions were kept in large warehouses, but smaller storage areas were used when there was no central organization. This seems to agree with the argument expressed by the Substantivist view which claimed that the economies of ancient societies are largely based on agriculture, and the data in this thesis confirms that.

In addition to agriculture, animal husbandry was also done intensively. However, this has been as a buffer, that is, as a precaution, against an agricultural crisis (Marston & Branting, 2016, p.28-29). Otherwise, it cannot be said that animal husbandry is the dominant economic occupation. The number of animals and which animals will be used in production also changed from one period to another (from centralization to de-centralization). Finally, it seems that trade has been done, but this was secondary activity compared with agriculture and animal husbandry. Probably, the trade was shaped by the demands of the elite class. At least scale of the trade seems to have

grown with them and remained insignificant without them. This view, also, confirms the assumption of the Substantivism school.

Finally, the presence of the central authority has played a catalyst (facilitator) role in increasing agricultural productivity and the transition to mass production of ceramic. Authorities may have pushed people into overproduction by force or persuasion. In addition, the existence of central authorities may have triggered increasing trade. In particular, we have studied the rise in imported goods from different regions and settlements in Gordion under Achaemenid rule.

CHAPTER V

CONCLUSION

This thesis aims to understand Central Anatolia's economic structure from the end of the Late Bronze Age to the Iron Age. To achieve this aim, seven settlements located in Central Anatolia were chosen. These settlements are, respectively Gordion, Kerkenes, Kaman-Kalehöyük, Çadır Höyük, Boğazköy, Uşaklı Höyük, and Kınık Höyük. Before investigating these settlements, this thesis introduced ancient economic theories and theories which would be helpful to understand Central Anatolia's economic structure from the end of the Late Bronze Age to the Iron Age.

Ancient economy theories were discussed in the second chapter of the thesis. According to Substantivist/Primitivist view, ancient economies were different both in quantity and quality. Ancient economies were embedded in the social systems. Modern concepts such as market, rational choices, and extensive trade networks are not used to understand ancient economies. According to the substantivist view, commerce was seen as a marginal business, and agriculture was the predominant mode of production in ancient economies; therefore, ancient economies were not complex as capitalism; therefore, their economies were quite primitive. Subsequently, Karl Polanyi was introduced in the following pages. Polanyi's ideas are familiar with the substantivist view. For him, social relations were more important than economic relations like profit, making a fortune, and the market in ancient economies. He asserted that in ancient economies, profit was not an end in itself, and it was used as means to achieve other goals.

In the following pages, Modernism/Formalism was introduced. This view is seen as the opposite of the substantivist view. According to this view, ancient economies

differed in quantity, not quality. Own profit-maximizing, want-satisfying logic, and rationality could be found in ancient economies, but they were less developed than modern economies.

Marx Weber and Karl Marx was featured in the following sections because these two crucial figures contributed substantially to ancient economic studies. Weber claimed that ancient economies lacked ration and systematic law. There was profit, commerce, and insurance in ancient economies, but they were not rationalist and systematic. There was trade, but it was too risky and not sustained in ancient economies. Weber claimed that ethics, religion, and social behaviors shaped economic activities.

For Karl Marx, ancient or pre-capitalist economies differed from modern economies. In ancient economies, the purpose of production was not wealth which is the opposite of capitalism. Individualization is peculiar to the modern world; therefore, it would not see in pre-capitalist societies. He/She did not produce for himself/herself; the aim of the production was the continuation of society. For Marx, there was no unified economy in the pre-capitalist world as in modern capitalism.

The next sections are related to more contemporary approaches. Firstly, New Archaeology and Post-Processual Archaeology were discussed. According to New Archaeology or Processual Archaeology, societal and economic changes were determined by external causes or structures such as environmental conditions, influences, stimuli, or even migrations. Humans' role in changes was passive, and their actions were adaptive against structural changes. On the other hand, Post-Processual Archaeology emphasizes agency or human actions in a change. From this view, human acts were not passive, and people were active in changes.

World-System Theory was explained in the following section. This theory is identified with Wallerstein. For Wallerstein, world-system theory is related to capitalism; therefore, it cannot apply to ancient economies. This theory tries to understand the "capitalist world economy." According to this view, there are centers, semi-centers, and peripheries. Centers have control over technology and production processes, and

labor organization. On the other hand, peripheries do not have these means. Peripheries are less developed in terms of technology and production process. As a result, funds constantly flow from peripheries to centers.

Later, this thesis investigated studies on the Mediterranean basin. Even though the region and time investigated in this thesis are mostly different from studies on the Mediterranean, due to the contributions from a theoretical perspective, studies on the Mediterranean are included.

Braudel's views was the first to be considered. His approach to history was strongly structuralist. The role of the environment and collective destinies are the most crucial things which shaped history. According to him, events and human roles are the minor decisive factors in history. He studied the Mediterranean as a whole; therefore, he attempted to evaluate many small areas in this geography over a single region. Apart from Braudel, more contemporary studies are included in this thesis. Besides evaluating the Mediterranean as a whole, these studies benefited from many disciplines. They tried to understand how the Mediterranean geography and environmental conditions changed societies and how the societies in this region interacted with each other.

After the theory section, this thesis tried to investigate seven settlements located in Central Anatolia to understand economic conditions and changes from Late Bronze Age to Iron Age. These settlements are, respectively Gordion, Kerkenes, Kaman-Kalehöyük, Çadır Höyük, Boğazköy, Uşaklı Höyük, and Kınık Höyük in the third chapter. To avoid repetition, it would be a good decision to mention the most striking results rather than to give them one by one for all these settlements.

First, all these settlements included in this thesis, do not provide data at the same rate. Some settlements, such as Gordion and Kaman-Kalehöyük, provide more reliable data than others since these two have been excavated for many years. Boğazköy can be included in these two sites, but a small area was inhabited in the IA. In this sense, it provides less data than Gordion and Kaman-Kalehöyük. On the other hand, Kerkenes had a different place from other sites because it was not inhabited during the LBA. Kınık Höyük seems to have advanced in a different historical process from other

settlements with an important feature. In this site, the central authority continued after the downfall of the Hittites; therefore, economic activities seem to have been shaped in line with the demands of the central power or rulers.

Uşaklı Höyük and Kınık Höyük are relatively new excavations when compared to the other settlements. Their contribution to feature studies will be crucial as they continue to be excavated and investigated.

Based on the available data, as Genz (2011) said “the basis of the Iron Age economy in Central Anatolia without any doubt rested on agriculture and animal herding” (p. 356) Apart from agriculture and animal herding, the role of trade seems to have been somewhat limited.

History is not static, and it is full of contradictions, progress, and regression. What kind of dramatic changes may occur in the economy when viewed over the *longue durée*. For instance, in the LBA, there was mass production of pottery under the hegemony of the Hittite central authority. People seem forced or persuaded to produce beyond their own needs. In general, these ceramics had a standard form and very little decoration. The crucial thing here is that there was non-household production.

By EIA, mass production ceramics was limited, and household production became dominant. The crucial reason behind transformation from mass-production to household production could be the removal of the Hittite central power from Central Anatolia. When the Phrygians established a Gordion-centered state, there was a transition to mass production in pottery production again. Data from Gordion provides a clear example for this. Also, such a transition would be seen in Boğazköy, Kaman-Kalehöyük, and Çadır Höyük. It would be a reasonable argument to claim that the Phrygian central authority was behind this mass production in the MIA. The Phrygian central authority could trigger mass production in pottery production. Moreover, the Phrygian culture spread to Central Anatolia as we saw in the Kaman-Kalehöyük section, there was an imitation of the Phrygian ceramic production style.

The presence and absence of central authorities seem to be an essential factor in the change of agricultural activities. For instance, there were large grain warehouses in the

LBA, especially in Kaman-Kalehöyük, Boğazköy, and Gordion. The surplus production obtained through agriculture was stored in these large warehouses. There was a production beyond the needs of the household-level. However, with the EIA, this situation was reversed, and household-level production model was adopted with a self-sufficient economic approach. In other words, large storage areas were not used in EIA. When the Phrygian central authority increased its power, the use of agricultural lands seems to have increased. Gordion provides the clearest example of such an intensification and extensification on agricultural lands and overuse of grasslands.

Also, with the emergence of central authorities, public architecture, city walls, irrigation systems, monumental buildings, and number of workshops increased. Rulers must have mobilized people (labor) to construct according to own desires. When central authorities disappeared, these constructions were not used.

All in all, economy is not a static phenomenon, and it is likely to see what kind of changes and transformations economic relations have undergone in the *long durée*. In this thesis, we saw how central authority shaped production (in agriculture, ceramics, and animal husbandry) and how it used it for its own purposes. In the region and period examined in this thesis, climatic conditions did not change much in the *longue durée*, but the production models and the scale of production changed. Central authority forced or persuaded people to produce for their own needs, and with the disappearance of these authorities, societies returned to the household-level economy. Also, rulers or central authority changed and transformed environmental conditions for their own aims.

Lastly, the literature on LBA to IA Central Anatolia did not include ancient economic theories applied for and understanding of the said transformation. Likewise, it is very difficult to find any theoretical approach on the results of the excavations and the settlements studied. Each settlement had been evaluated almost within itself, and it was not felt necessary to examine Central Anatolia's economic structure as a whole. We hope this thesis will make a small contribution to future studies and the theories of ancient and pre-capitalist economies.

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APPENDICES

A. TURKISH SUMMARY / TÜRKÇE ÖZET

Bu tez Geç Tunç Çağı'nın sonundan Demir Çağı'na kadar olan süreçte Orta Anadolu'nun ekonomik yapısını anlamaya çalışmaktadır. Coğrafi olarak Orta Anadolu, kuzeyde Pontus ve güneyde Toros Dağları olmak üzere bir dizi dağ sırasıyla çevrilidir. Bölgenin doğusunda ise dağlık alanlar yer alır. Bölgeyi çevreleyen sıra dağlar, bölgenin çevredeki komşularla iletişimini sınırlamıştır. Bölgede düz ovalar boyunca sıralanan birkaç nehir olmasına karşın kuraklık yüzyıllar boyunca bölge sakinleri için her zaman bir sorun teşkil etmiştir. Buna rağmen bölge tarihsel süreç içerisinde birçok yerleşimin yükselişine ve düşüşüne tanıklık etmiştir. Bu tezde bu yerleşimlerden yedi tanesi (Gordion, Kerkenes, Kaman-Kalehöyük, Çadır Höyük, Boğazköy, Uşaklı Höyük ve Kınık Höyük) incelenecek ve Geç Tunç Çağı-Erken Demir Çağı'ndaki ekonomik yapıları değerlendirilecektir.

Birinci Bölüm

Geç Tunç Çağı'nın sonundan Demir Çağı'na kadar olan süreç bir geçiş dönemini temsil ettiği için tezin amacına uygun olarak seçilmiştir. Hititler, Orta Anadolu'ya Genç Tunç Çağı'nda egemen bir konumda yer almaktadır. Hatta, Hititlerin bu dönemdeki hegemonyası Anadolu'nun da ötesine, Suriye'ye ve ötesine yayılmıştır. Genç Tunç Çağı'nda yaşanan kuraklık, istila ve çevre felaketleri gibi olaylar nedeniyle Hitit Devleti ortadan kalkmıştır. Hititler gibi sağlam bir siyasi teşkilatın ortadan kalkmasıyla Orta Anadolu kaotik bir döneme girmiş ve bölgede uzun süre merkezi bir politik organizasyon ortaya çıkmamıştır. Erken Demir Çağı (MÖ 1100-950) olarak adlandırılan bu geçiş döneminde, Orta Anadolu'nun ekonomik ve sosyal yapısı önemli ölçüde değişikliğe uğramıştır. Örneğin, insanlar kendi kendilerine yeten bir ekonomik anlayışı benimsemişlerdir.

Bu dönemde, Orta Anadolu batıdan gelen çeşitli göçlerle karşılaşmıştır. Bu göçler sonucunda Orta Demir Çağı'nda (MÖ 10-7.yy) Gordion merkezli Frigya Krallığı

kurulmuş ve Orta Anadolu'da uzun bir süre varlığını korumuştur. Friglerin merkezi bir otorite kurmasıyla birlikte bölgede bazı önemli ekonomik değişimler yaşanmış ve yeniden kendi kendine yeten (geçimlik) bir ekonomi modelinin ötesine geçilmiştir. Tarımsal üretimde, hayvancılıkta ve seramik üretiminde niteliksel değişimler meydana gelmiş ve üretimde önemli bir artış yaşanmıştır. Geç Demir Çağı'nda (MÖ-547-33), Ahameniş İmparatorluğu, Orta ve Batı Anadolu'da yer alan Lidya ve Frigya Krallıklarını yenilgiye uğratarak Orta Anadolu'ya hükmetmiştir. Ahameniş yönetimi altında, Orta Anadolu imparatorluğun geri kalan toprakları ile ekonomik ve kültürel bir ilişkiye girmiştir.

Bu tezin amacı doğrultusunda, yukarıda bahsi geçen yedi yerleşimin siyasi ve ekonomik yapıları ele alınacaktır. Bu yerleşim yerlerinin iklim ve çevre koşulları da eldeki veriler doğrultusunda değerlendirilecektir. Bu tez aynı zamanda iklim, çevresel koşullar ve politik organizasyon arasındaki ilişkiyi ortaya koymayı amaçlamaktadır. Tezin temel amacı, üretim ilişkilerinde ve üretimin kapasitesinde ne tür değişimler yaşandığını anlamaya yöneliktir. Üretimde yaşanan dönüşümleri temsil edebileceği düşünüldüğü için çanak çömlek üretiminde yaşanan değişimlere özel bir önem verilmiştir. Tarımsal üretimin ve tarım arazilerinin zaman içerisinde ne gibi değişimler yaşandığı da tezin konusu arasındadır. Ayrıca hayvancılıkta yaşanan değişimler, hangi hayvanların ne tür amaçlar altında beslendiği gibi konular da hayvancılıkta yaşanan değişimler de incelenmiştir.

Antik çağ ekonomi teorileri yardımıyla, tezde incelenen dönem ve bölgenin ekonomik yapısı incelenmeye çalışılmıştır. Bu teorileri kullanmaktaki amacımız arkeolojik ve tarihsel verileri daha iyi değerlendirmektir. Tezde her bir kuramsal yaklaşım ayrı ayrı verilse de aslında bu kuramlar birbirleriyle oldukça yakından ilişki içerisindedir. Her ne kadar bu tezde anlatılan kuramların hiçbiri incelenmekte olan dönem ve bölge hakkında doğrudan bir şey söylemese de antik çağ ekonomilerini inceleyenler için temel bakış açıları sunmaktadır.

Bu tez kapsamında Orta Anadolu'da yer almış yedi yerleşim değerlendirilmiştir. İncelenen her yerleşim aynı coğrafyada yer almasına rağmen ayrı ayrı sunulmuştur. Genel olarak Orta Anadolu'nu da yer alan yerleşimleri bir bütün olarak değerlendiren

çalışma sayısı oldukça kısıtlıdır. Yapılan çalışmalar genel olarak her yerleşimi kendi özelinde değerlendirmeye yöneliktir. Bu şüphesiz arkeoloji disiplinde yer alan birisi için çok da şaşırtıcı değildir. Ancak aynı bölgede yer almış çağdaş yerleşimleri bir arada veya bir bütün içerisinde değerlendirmek kuşkusuz incelenen dönemin toplumsal, siyasi ve ekonomik yapısını anlamak için oldukça önemlidir. Çünkü bölge üzerinde kurulan pek çok devlet oldukça geniş sınırlara hükmetmiştir. Yalnızca kendi yaşam alanlarını değil kendilerine komşu olan yerleşimleri de siyasi, toplumsal, kültürel ve ekonomik anlamda etkilemiş ve hatta kendi amaçları doğrultusunda köklü değişimlere uğratmıştır. Bu tezde incelenen teorilerin yardımıyla bölge daha kapsamlı bir şekilde değerlendirilecektir.

İkinci Bölüm

Tezin ilk bölümünü antik çağ ekonomi teorileri oluşturmaktadır. Antik çağ ekonomi teorileri genel olarak iki zıt kampa bölünmüştür. Bir yanda Substantivist/Primitivist görüş yer almaktadır. Bu görüşün savunduğu temel sav ise şu şekildedir: Antik çağ ekonomileri, modern kapitalist sistemden hem nitelik hem de nicelik bakımından farklıdır. Kapitalizm öncesi toplumlarda temel ekonomik uğraş tarımdır. Hayvancılık tarımı takip eder ve herhangi bir tarımsal krize karşı bir önlem olarak yapılır. Ticaret ise oldukça sınırlı bir alanda yapılmaktadır. Yalnızca elitlerin talepleri doğrultusunda gerçekleştirilir ve ekonomide önemli bir yere sahip değildir. Antik çağda “ekonomi” kavramı yoktur. Ekonomik ilişkiler toplumsal ilişkilerle iç içedir ve toplumsal ilişkiler dışında herhangi bir ekonomik eylem bulunmamaktadır. Bu yüzden antik çağ ekonomileri gelişmemiştir ve ilkel bir düzeyde kalmıştır.

Bu teorinin tam zıttı olarak değerlendirilebilecek olan Modernism/Formalism yer almaktadır. Bu görüşe göre antik çağ ekonomileri modern kapitalist sistemden niteliksel olarak değil nicelik olarak farklıdır. Bugün ekonomide kullanılan kavramlar (örneğin; burjuva, seri üretim, proletarya, kapital) antik çağ ekonomilerini anlamak için kullanılabilir. (Meikle,1995,p.178) Ekonomi hane düzeyinin ötesinde de gerçekleşmiş olabilir. Antik çağı tek bir ekonomik düzlemde ele almak oldukça yanlıştır çünkü antik dönemlerde birbirinden farklı birçok bölge ve dönem vardır. (Hindess, 2007, p.498-499)

Bu iki görüşten sonra sırasıyla Max Weber ve Karl Marx'ın antik çağ ekonomilerine dair görüşleri değerlendirilmiştir. Her iki ismin ortak noktasında şudur: Antik çağ ekonomileri modern kapitalist sistemden oldukça farklıdır. Weber için antik çağ ekonomileri belirli bir mantıktan ve sistemden yoksundurlar. (Weber,1998, p.7-21) Yapılan ekonomik faaliyetler toplumsal kaygılarla düzenlenir. Ticaret oldukça riskli bir eylem olduğundan oldukça geri kalmıştır. Örneğin, Weber'e göre Roma döneminde yapılan yollar ticaret için değil, orduların rahat bir şekilde hareket edebilmesi için yapılmıştır. (Weber, 1998, p.392) Ayrıca, malların veya emtiaların elde edilmesi tamamen kaba kuvvete, savaşlara ve yağmalara dayalıdır bu yüzden de antik çağ ekonomileri oldukça ilkel bir düzeyde kalmıştır.

Karl Marx'a göre kapitalizm öncesi yapılan ekonomik faaliyetler yalnızca toplumun hayatta kalabilmesi ve varlığını sürdürebilmesi için yapılmıştır. (Marx & Engels, 1977, 22) Marx için, Roma'da bile üretimin amacı zenginlik değildir. Bir amaç olarak zenginlik, sadece toplumun marjinal olarak görülen (Yahudiler) gibi kesimleri tarafından amaçlanmış ve eylemleri de bu amaç doğrultusunda yapılmıştır. (Marx & Engels, 1977, p.31-32) Birey/bireyselleşme gibi kavramlar antik dönemler için geçerli değildir. Ekonomik faaliyetler yalnızca hayatta kalmak için yapılmıştır diye söyler Marx.

Daha sonra arkeoloji disiplini içerisinde Yeni Arkeoloji (Süreçsel) ve Post-Süreçsel Arkeoloji gibi kuramlara da yer verilmiştir. Bu iki teorinin ortaya koydukları görüşler sadece ekonomi ile sınırlı kalmamış toplumsal, kültürel ve çevre-insan ilişkisini de anlamaya çalışmışlardır. Binford'a göre kültür çevresel koşullarda yaşanan değişimlere, nüfus baskısına ve komşu kültürel sistemlerle girilen rekabete insanın bir tepkisi olarak ortaya çıkar. (Trigger, 2006, p.94) Bu yaklaşıma göre öznenin değişimdeki rolü oldukça sınırlı bir durumdadır. İnsan çevresinde gelişen ve değişen değişimlere karşı pasif bir durumdadır. Süreçsel Arkeolojiyi kendisinden sonra gelen Post-Süreçsel Arkeoloji takip etmiştir. Bu yaklaşıma göre kültür, insanın inanç ve davranışlarında bir çeşitlilik olarak görülür. (Trigger, 2006, p.444) İnsanın yaşanan değişimlerdeki rolü pasif değildir aksine o değişimin yaşanmasına bizatihi olarak aktif bir şekilde katılmaktadır diye dile getirmektedir.

Bu görüşlerden sonra daha çağdaş sayılabilecek görüşlere yer verilmiştir. Öncelikle Wallerstein'ın Dünya Sistemleri Analizi tanıtılmıştır. Bu teori kapitalist dünya ekonomisini anlamaya yönelik bir girişimdir. Teori her ne kadar günümüz kapitalizmin doğuşunu, işleyişini ve yayılışını anlamaya yönelik bir girişim olsa da bazı araştırmacılar tarafından daha eski dönemleri anlamak için kullanılmıştır. Bu teoriye göre teknolojiyi, işgücünü ve üretim işleyişini kontrol eden merkezler ve bunlardan yoksun olan çevreler bulunmaktadır. Çevreden merkeze doğru sürekli bir kaynak akışı olmaktadır. Wallerstein'a göre politik anlamda birleşik bir dünya ekonomisi antik dönemlerde yoktur çünkü kaynak akışını sürekli kılacak teknolojilerden yoksundurlar. Bu sebeple bu teorinin antik dönemlere uygulanması mümkün değildir. Wallerstein'ın antik dönemlere dair teorinin uygulanamayacağı konusundaki yaklaşımını kabul etmeyenler de bulunmaktadır. (Kohl, 2011, p.144-145) Onlara göre bugünkü kapitalizme benzeyen (örneğin altın ve gümüş cinsinden bir sermaye birikimi) bir sistem antik dönemlerde de mevcuttur. (Ekholm & Friedman, 2013, p.140)

Son olarak Akdeniz havzası üzerine yapılan çalışmalara yer verilmiştir. Çevresel koşulların, iklimin ve coğrafyanın toplumlar ve onların ekonomileri üzerine ne tür etkileri olduğunu anlamamız açısından Braudel (1989) ve Horden, & Purcell (2000) gibi kişilerin çalışmaları oldukça önemlidir. Bu tezde de eldeki veriler doğrultusunda incelenen dönem ve bölgenin çevresel koşulları dile getirilmeye çalışılmıştır. Çevre ile insan ve üretim ile politik organizasyonlar arasında nasıl bir ilişki olduğunu anlamak için yukarıda bahsi geçen kişilerin çalışmalara yer verilmiştir. Onların inceledikleri bölge ve zaman her ne kadar bu tezde incelenen konudan farklı olsa da tarihe yaklaşımları önemli bakış açıları sağlayacaktır.

Üçüncü Bölüm

Teori bölümünden sonra tezde incelenecek bölge ve zaman dilimi tanıtılmıştır. Daha sonra Gordion, Kerkenes, Kaman-Kalehöyük, Çadır Höyük, Boğazköy, Uşaklı Höyük ve Kınık Höyük gibi Orta Anadolu'da yer alan yerleşimler tanıtılmıştır. İncelenen her yerleşim aynı oranda veri sağlamamaktadır. Bunun arkasında yatan sebepler çeşitli olmakla birlikte en önemli sebep olarak bazı yerleşimlerin uzun yıllardır kazılmasına karşın bazı yerleşimlerin kazı tarihi daha kısa olması olarak gösterilmiştir. Gordion ve

Kaman-Kalehöyük gibi yerleşimler uzun yıllardır kazıldıkları için diğer yerleşimlerden daha çok veri sağlamaktadır. Boğazköy de bu iki yerleşime dahil edilebilir ancak burada da Demir Çağı'nda küçük bir alan (Büyükkale) iskan görmüştür. Öte yandan Kerkenes, Geç Tunç Çağı döneminde iskan görmediği için diğer yerleşimlerden farklı bir yere sahiptir. Kınık Höyük ise diğer yerleşimlerden farklı bir tarihsel süreç içerisinde ilerlemiştir. Bu yerleşimde Hitit merkezi otoritesi ortadan kalktıktan sonra da merkezi otoritenin varlığı söz konusudur bu nedenle Kınık Höyükte yapılan ekonomik faaliyetler, belirli bir merkez gücün veya yöneticilerin talepleri doğrultusunda şekillenmiş gibi görünmektedir. Kınık Höyük ve Uşaklı Höyük tezde bahsi geçen diğer yerleşimlere göre nispeten yeni kazılardır. Buralarda kazılar ve araştırmalar devam ettikçe arkeolojiye katkıları şüphesiz ki çok önemli olacaktır. Eldeki verilere göre tüm bu yerleşim yerlerinde hem Geç Tunç Çağı'nda hem de Demir Çağı'nda baskın üretim biçimi tarımdır. Hayvancılık tarımsal faaliyetlere nispeten ikincil bir konumda icra edilmiş gibi gözükmektedir. Tarımsal faaliyetlerde yaşanabilecek herhangi bir krize karşı bir önlem olarak hayvancılık yapılmıştır. Ticaret elbette hem Geç Tunç Çağı'nda hem de Demir Çağı'nda icra edilmiştir ancak oldukça sınırlı bir alanda kalmış gözükmektedir. Ticaret sadece elitlerin veya yönetici sınıfın talepleri doğrultusunda yapılmış gibi durmaktadır.

Tezde bahsi geçen yedi yerleşimin de eldeki veriler doğrultusunda çevresel koşulları tezde yer edinmiştir. Çevresel koşulların uzun vadede önemli bir değişime uğramamasına karşın toplumların ekonomileri hem nitelik hem de nicelik olarak değişime uğradığı ya da uğratıldığı görülmüştür. Ekonomik yapıdaki değişimleri anlamak amacıyla seramik üretimine özel bir önem gösterilmiştir.

Sonuç

Tarih durağan değildir. Tarih çelişkiler, ilerlemeler ve gerilemelerle doludur. *Longue durée* üzerinden tarihe bakıldığında belirli bir bölgede yaşanan ekonomik değişimler daha iyi bir şekilde gözlenebilir. Örneğin, Geç Tunç Çağı'nda Hitit hegemonyası altında seramikte seri üretim söz konusu olmuştur. Diğer bir deyişle, insanlar kendi ihtiyaçlarının ötesinde bir üretime zorlanmış veya ikna edilmiştir. Bu dönemde Orta Anadolu'da üretilen seramikler standart bir forma ve çok az bezemeye sahiptir. Erken

Demir Çağı'na gelindiğinde ise seramikteki seri üretim sınırlı bir hale gelmiş ve hane düzeyinde bir üretim hâkim konuma gelmiştir. Seri üretimden hane üretimine geçişin en önemli neden, Hititler'in Geç Tunç Çağı'nın sonlarında yıkılması olarak gösterilebilir. Öte yandan Frigyalılar Gordion merkezli bir krallık kurduklarında çanak çömlek üretiminde yeniden seri üretime geçiş olmuştur. Gordion'dan gelen veriler bu durumun en net örneklerini oluşturmaktadır. Ayrıca, Boğazköy, Kaman-Kalehöyük ve Çadır Höyük 'de de tekrardan seri üretime geçiş görülecektir. Orta Demir Çağı'nda yaşanan bu seri üretimin arkasında Frigya merkezi otoritesinin olduğunu öne sürmek makul bir argüman olacaktır. Ayrıca Kaman-Kalehöyük bölümünde gördüğümüz gibi Frigya kültürü Orta Anadolu'ya yayılmış ve Frigya seramik üretim tarzlarının taklidi söz konusu olmuştur.

Tarımsal faaliyetlerin değişmesinde de merkezi otoritelerin varlığı ve yokluğu temel bir faktör olarak görünmektedir. Örneğin, Geç Tunç Çağı'nda, özellikle Kaman-Kalehöyük, Boğazköy ve Gordion'da büyük tahıl ambarları bulunmaktadır. Tarımsal üretim fazlası bu büyük depolarda muhafaza edilmiştir. Diğer bir deyişle, tarımda hane düzeyinin ötesinde bir üretim yaşanmıştır. Ancak Hititler'in ortadan kalkmasıyla birlikte bu durum tersine dönmüş ve kendi kendine yeten bir geçim ekonomisine dönülmüştür. Erken Demir Çağı'nda bu büyük depolama alanların kullanımı terk edilmiştir. Diğer taraftan Frigya merkezi otoritesinin gücünü arttırmasıyla birlikte tarımsal arazilerin kullanımı tekrardan bir artış göstermiştir. Gordion'da tarım arazilerinde yaşanan yoğunlaşma ve genişlemenin ve otlakların aşırı kullanımının Frigya merkezi otoritesiyle ilişkisi bulunmaktadır.

Ayrıca, güçlü bir politik organizasyonun devreye girmesiyle birlikte kamusal alanlar, surlar, sulama sistemleri, anıtsal yapılar ve atölyelerin sayısında önemli bir artış yaşanmıştır. Yönetici sınıf kendi amaçları doğrultusunda insan emeğini (işgücünü) manipüle etmiş ve yönlendirmiştir. Merkezi bir gücün olmadığı durumlarda ise inşa edilen kamusal alanların kullanımı terk edilmiş ve tekrar inşa edilmemiştir.

Sonuç olarak, ekonomi kavramı statik/değişmez/durağan bir olgu değildir. Bu tezde merkezi otoritenin kendi amaçları doğrultusunda üretimi (tarım, seramik ve hayvancılıkta) nasıl şekillendirdiğini ve kullandığını gördük. Bu tezde incelenen bölge

ve zamanda iklimsel kořulları uzun vadede önemli bir deęişime uğramamış ancak üretimin yapısı ve ölçeęi deęişmiştir. Merkezi otorite insanları kendi ihtiyaçlarının ötesinde bir üretime zorlamış veya ikna etmiştir. Bu otoritelerin ortadan kalkmasıyla birlikte insanlar hane düzeyinde veya kendi kendilerine yeten bir ekonomik anlayışı benimsemişlerdir. Son olarak, merkezi otoriteler kendi amaçları doğrultusunda çevresel kořulları deęiřtirmiş ve dönüřtürmüřtür.

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