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FALL OF THE CYCLOPES:
UNDERSTANDING THE COLLAPSE OF THE MYCENAEAN PALACE STATES

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ABSTRACT

The Aegean polities of the Mycenaean Palatial Period (c. 1400 – 1200 BCE) were home to some of the most impressive feats of architecture and striking concentrations of precious and exotic goods not only of the period, but indeed of Aegean history. The Mycenaean material burst onto the historical record in the final centuries of the Mediterranean and Near Eastern Bronze Age. Yet, by the end of this period, it had virtually disappeared from the archaeological record. Much ink has consequentially been spilled in the hopes of answering *why* and *how* this occurred. This paper will provide an overview of causal factors focused upon by previous scholarship and will lay out a compelling process by which some of these factors would have acted in conjunction to bring about the collapse of the Mycenaean civilization. It will consider new data pertaining to the shifting climatic conditions of the end of the Bronze Age. It will also make a particular point of avoiding the oft-made mistake of previous explanations in placing particular emphasis on any *one* contributing factor, but will rather discuss how the contributing factors of collapse played off and exacerbated one another to bring about the collapse. Finally, the pertinence of this ancient collapse to the conditions of the modern global system will be discussed in the concluding of the paper.

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Chapter 1

Introduction

Sometime around 3600 years ago, a new force appeared rather suddenly in the Eastern Mediterranean world. A number of states arose on the mainland of what is now Greece. At their center they constructed large administrative centers, from which sprouted roads and bridges, built with massive blocks, a style of construction now referred to as Cyclopean Architecture, as later inhabitants could only fathom that these blocks must have been put in place by great Cyclopes. After all, what mortal hand could have lifted those blocks into place? This same extremely labor intensive form of construction was put to use in the construction of massive fortification walls at sites such as Tiryns and Mycenae in the Argolid, as well as of great tombs for elite burial, the most notable example of which being the so-called Treasury of Atreus in the hills leading to the palace at Mycenae. Other elite burials in this region have yielded treasure troves of wealth in such a concentration as was never before seen in the Aegean, and would seldom be seen again in the region. These building projects would have required not only unthinkable man-hours of taxing and tedious labor, but also the input of a highly skilled group of architects. The creation of vast networks of infrastructure in this same demanding style of construction suggests a highly integrated centralized administration, an idea further supported by the existence of a great number of administrative texts in a new language, borrowing a syllabary script from the Cretan Minoans to the South. That script is what is referred to as Linear B, and the language it recorded has been identified as an early form of Greek, now referred to as Mycenaean Greek. The burial goods found at these Mycenaean sites furthermore suggest

extreme concentrations – as well as equally extreme conspicuous consumption – of wealth. Overall, these remains suggest the relatively sudden rise of a highly prosperous and capable system on the mainland of Greece.

Then, by about 3200 years ago, in the context of large-scale turmoil throughout the international system of the Late Bronze Age Eastern Mediterranean, these Mycenaean polities one by one start to fall. Within a century, many Mycenaean palace sites are abandoned all together. Most of those that remain see populations greatly diminished as populations disperse from the centers, favoring smaller settlements in secluded locations, hidden away in the hillsides of Greece, away from the coasts. A few exceptional sites do see an increase in population in this period, most notably Athens. These sites are, however, exceptions, and none come anywhere near to the suggested size and complexity of the largest polity systems of the previous period. Many of the hallmarks of Mycenaean civilization disappear altogether. Cyclopean Architecture falls entirely out of use, to be replaced by less labor-intensive styles. The use of Linear B disappears entirely, never to return, and the Greek language goes unwritten for another four centuries, until an adapted form of the Phoenician alphabet is adopted at the advent of the Greek Archaic Period. It is this disappearance of textual evidence that leads to the labeling of these four centuries to come as the Greek Dark Age (though this labeling sees some push-back in modern scholarship). Needless to say, the situation on the mainland of Greece goes through a wholesale, dynamic change in the span of a single generation. Put simply, Mycenaean society collapses.

The obvious question then, and the one that this paper will seek to provide answer to, is *what happened?* How did the Mycenaean polities that seemed so prosperous and capable manage to collapse? This is of course far from the first time that an answer to this question will be proposed. Unfortunately a great number of proposed explanations for this phenomenon are either

mono-causal, or more often, while accepting the inherent complexity of the Mycenaean Collapse, they place emphasis on a particular contributing factor and fail to elaborate on how their favored factor interacts with other proposed causes and contributing factors. These suggestions range anywhere from the determining power of an ancient climate event to invasion by hostile invaders from the sea, to such ideas as the inherent tendency of systems to eventually fail or revolution in response to the corruption of the Mycenaean elite. This paper recognizes that the collapse of Mycenaean Civilization is too complex an issue to be explained by any single factor, and rather than seek to add to the list of what might be contributing to the eventual collapse, it will seek to identify the various notable factors involved in the collapse. This includes both the internal susceptibilities of the Mycenaean system and the external pressures that acted upon it leading up to its collapse. It will then explain how these factors act to play off and exacerbate one another to effect the observed collapse.

Inquiry into this subject is of particular importance in today's day and age. The situation of the Mycenaean system exemplifies a concept widely accepted as obvious to scholars of collapse: namely that, regardless of the apparent prosperity or vitality of a system, it is always capable of collapse, and that collapse will often occur far more swiftly than the system's proceeding growth. This importantly implies that systemic growth does not necessarily correlate to resilience. The growth of the modern global system, and in particular the capitalist economic system that the US plays a leading role in, has occurred at a perhaps unprecedented pace. In this respect, as well as in respect to some of the impending external pressures (chief among which being the large scale climate event that we are entering) that this system faces, some worrying similarities can be noted between our situation and that of the ancient Mycenaean polities. By better understanding the existent systemic vulnerabilities of the Mycenaean system and how they

reacted to large-scale external pressures, we can better understand how our own system's susceptibilities may react when our own external pressures come to bear.

To best understand the situation surrounding the Mycenaean collapse and its causes, this paper is organized in four distinct parts. First a brief overview of what the so-called Mycenaean palace economies were and how they likely operated will be provided. This will serve to provide background not only for *what* it is that is collapsing in the first place, but also for some of the unique features of the system that may have served as susceptibilities when the system faced stark pressures from the outside. In keeping with this, the second part will describe some notable theories of previous works that focus on internal system processes, including Tainter's general theory of complex system collapse and Johnson's general theory of *social hubris*. The third portion will reflect the second, by looking at the existent external pressures that would have faced the Mycenaean polities of the period, all of which have been the central cause of previous collapse theories. Finally, part four will consist of a synthesis of all the aforementioned factors, illuminating the process by which these factors would have influenced one another and together would have brought down the Mycenaean system.

Chapter 2

The Palace States of Bronze Age Greece

Before discussing the inherent instabilities of the Mycenaean palatial system and the external pressures that it faced at the conclusion of the Bronze Age, it is necessary to first focus on *what* this paper means when it talks about a *Mycenaean system* or a *palatial polity*. Though all complex systems are prone to collapse, to understand how this particular system collapsed one should first understand *what* it is that is collapsing. As will be seen, the Mycenaean system is very much a product of its unique circumstances. This chapter will take some time to briefly lay out how it is that the Mycenaean palace states came into being, how they seem to have functioned and, one might say, malfunctioned, and what their role was in the larger international system of the Bronze Age Eastern Mediterranean. It will furthermore serve to make an important note that not all the Mycenaean palace states functioned exactly the same as one another, and indeed they did not all collapse at the same time or in the same exact manner. It will provide context from recent discussions on how these key differences manifest in perhaps the two most well-known and oft-discussed Mycenaean palaces, Mycenae and Pylos. In doing so it will set the frame for what it is that so suddenly appears on the Greek mainland in the Late Bronze Age, and what in just a few centuries comes to just as a startling end.

2.1 The Palaces: What Were They and Where Did They Come From?

The *Mycenaean Palace States* were a group of small polities that developed and flourished between the 17th and 13th centuries BCE. The name is comprised of two parts. The former, *Mycenaean*, referred to the elite culture that each polity shared, characterized by a shared archaic Greek language, as well as norms of elite good exchange and conspicuous consumption. The latter, *Palace State*, refers to the political organization of each polity, which centered on a large administrative center that has come, due to early misconceptions as to the function of the building, to be known as a *palace*. To understand system collapses in the 12th century BCE, it is important to understand both the cultural and political economic components of the Mycenaean palatial polities.

Mycenaean Elite Culture

This paper makes a point of referring to Mycenaean culture as an *elite culture*. The reason for this stems from the sources by which we understand what the culture was. As with any ancient culture, our understanding of what made up the ancient Mycenaean culture is derived from the available physical and textual sources. In this case, however, these sources are mostly restricted to the remains of the elite caste of society. The massive Cyclopean palaces that served as the center of each polity seem to have served as a residence for the *wanax*, the bronze age king and top of the Mycenaean socio-political hierarchy, his family, court, administration, and perhaps (as suggested by the discovery of idols within the walls of Mycenae) the higher officials of the religious hierarchy. At Mycenae, some nearby residences have been uncovered that seem to have been home to a further group of bureaucratic officials. The dwellings of the people, or

damos as they are called in the Linear B tablets, leave for the most part no remains and little can be recovered directly to provide much understanding of how they lived or what their culture looked like. The elite on the other hand left behind hordes of functional goods, such as feasting wares and storage containers, in their palaces, as well as great quantities of luxury goods, which can also be found in the those elite burials that have escaped looting over the centuries. Where Linear B tablets, which recorded an archaic form of the Greek language, known now as Mycenaean Greek, can be found, further information as to the practices of the elite and the administration of their lands can be garnered.¹

The picture that these sources paint is one of an elite caste of rulers and aristocrats that monopolized access to an incredible amount of wealth. In fact it seems that the display of this wealth through elite burials, lavish feasts, and elite gift exchange served as the legitimizing basis for these elites within their social hierarchy. The goods that they displayed, traded, and buried are often those which have their origins in lands distant from the Mycenaean heartland. Mycenae alone has provided such goods as amber from the Baltic sea region, gold likely mined in the Carpathian mountain range of Eastern Europe, tin that may very well have been acquired as far afield as Cornwall, as well as goods marked with the Egyptian cartouche clearly stemming from New Kingdom Egypt, to name only a few. Such a plethora of exotica suggests that these elites derived much of their wealth through the facilitation of long distance trade. That so much of this wealth is seemingly wasted by being buried in the earth suggests further that the Mycenaean elite had a lot of it, as well as that such conspicuous consumption was an important function of their culture and their means of political legitimization.

¹ See Section 2.3 for further information on the limitations of such information.

The Palace State

As mentioned above, the palace state is so known because each Mycenaean polity centered on a single megalithic large administrative center. When the first of these was uncovered at Mycenae by Heinrich Schliemann, he believed that he had discovered the palace of the Homeric King Agamemnon. For this reason, these structures came to be known as palaces, and the name stuck, despite the fact that these centers were certainly more than private abodes. The design of these structures to a large degree seem to draw influence from their Aegean predecessors, the Minoan palaces on Crete. Unlike the Minoan palaces, however, which centered on a large public courtyard, the Mycenaean palace centered on a room known as a *megaron*. The *megaron* was not a large public space, but rather the audience chamber of the *wanax*, with a large hearth at its center. It has been suggested that this corresponds to a greater focus on the king as the center of the palace states in Greece. Beyond this room, most Mycenaean palaces also housed large storage chambers capable of storing large amounts of grain and perfume, as well as a great number of dishes and utensils. This suggests that the administrative center served a certain redistributive function, and served as well as a hosting place for large feasts and a production and storage site for certain elite exchange goods.

Though the full scope of the social actors involved in the various social hierarchies of the palace state will be covered below, one should begin by noting that three clear groups existed with relative autonomy and agency in Mycenaean society. The first was comprised of the *wanax*, his family, court and administration. This group comprised the core political entity of the state. The second is what is known as the *damos* or the administrative body of the common people that

worked the land.² The third group was comprised of the religious hierarchy. The agency of all three of these groups can be seen through the interesting case of the priestess Eritha. This case, recorded by the local bureaucrat of the district, in which the dispute took place, (an extension of the palace authority) involves a dispute between the priestess and the *damos*. The former claims her land was a holding of the god, and presumably tax exempt. The *damos* claims the land over which she had tenure was of another sort, one might guess the sort of land that the *damos* was warranted to tax.³

Though the *wanax* was certainly the top of this socio-political pyramid, it seems clear that his dominion over the people was not absolute and he did not play an ever-present role in the lives of the *damos*. Indeed, the focus of the Mycenaean elite seemed often to be limited to that which further cemented and advanced their place within the hierarchy. Thus, they sought to directly control certain industries that produced those elite goods that could be traded or otherwise displayed to further emphasize their status, such as the production of chariots and perfumes.⁴ The *wanax* engaged with the *damos* through taxation of grain to support the functions of the palace, as well as in the recruitment of labor to construct their monumental Cyclopean works. These projects could take the form of palace architecture, elite burial sites, or vast networks of public infrastructure, like roads and bridges, the remains of which can still be found in varying condition throughout the Argolid and elsewhere. Since much of the economic profits that served as their primary source of political legitimization was derived from the facilitation of long-distance trade, it would be expected that, like the other so-called *great kingdoms* of the

² More discussion of the *damos* and Nakassis' view of their origins will be covered to come.

³ Dimitri Nakassis, *Individuals and Society in Mycenaean Pylos*. 171-172.

⁴ Robert Schon, "Chariots, Industry, and Elite Power at Pylos," in *Rethinking the Mycenaean Palaces II*. 133-146.

Eastern Mediterranean, the Mycenaean palaces would have also focused on promoting and protecting the trade of their travelling traders and merchants. Records on foreign imports, however, do not seem to be kept in the Linear B tablets.⁵

A Brief History of the Mycenaean Palace States

The roots of the Mycenaean palace states can first be seen in the 17th century BCE, and are characterized by the development of lavish elite burials throughout the Greek mainland in the form of cist, chamber, tholos and shaft graves. These styles seem to emulate the communal burials of Crete prior to this period, but they function as resting places for a much smaller elite group of individuals, and the goods that come to be interred with some of these bodies far outmatch their Minoan precedents in quantity and luxury. Since the first markers of this culture come in the form of lavish elite burials, it must be assumed that the prior period was characterized by the rise of this elite caste and their consolidation of control over various territories of the Greek mainland.

Elsewhere in the Eastern Mediterranean at this time, a number of so-called *great kingdoms* are developing and interacting with one another through means of long-distance trade and royal gift exchange. In Anatolia, the Hittite kingdom is beginning to move towards imperial control of territory in Syria and later the Levant, as New Kingdom Egypt lays the foundation to do the same from the South. In the years to come such kingdoms as Mitanni and Kassite Babylonia will come to join these ranks well. At the center of trade in the Eastern Mediterranean, and especially in the Aegean at this time, are the Minoan palaces of Crete, with the palace of

⁵ Michael L. Galaty, "Mycenaean Glocalism: Greek Political Economies and International Trade" in *Trade and Civilisation: Economic Networks and Cultural Ties, From Prehistory to the Early Modern Era*. 161.

Knossos as their cultural and economic head. Early emulation of Minoan pottery styles, as well as architectural and burial themes, suggests that the so-called *Minoan thalassocracy* was in regular contact with the burgeoning Mycenaean kingdoms. As discussed earlier, some burials of this Early Period, principle of which being those of the shaft graves at Mycenae, were home not only to goods from the south, which would have been acquired through trade contacts likely monopolized by the Minoans, but also from the Europe to the north. It is therefore likely that some of these early polities at least would have controlled vital trade nodes to the Europe trade networks, making them important trade partners for the Minoan elite.

From the 17th through the 15th century BCE, the Mycenaean kingdoms would have developed their role not only as intermediaries, but also increasingly as facilitators of long-distance trade between the producers of the European periphery regions and the markets of the Eastern Mediterranean core, a trend that would foreshadow the Mycenaean trade networks eventually eclipsing those of their Minoan influencers.⁶ The turn of the 14th century would serve as a pivotal period in the history of the Mycenaean polities, and is often referred to as the demarcation line between the Early and Late Mycenaean Periods. It is by this point, in the aftermath of the catastrophic Thera eruption, that the trade networks of the Minoan palaces seem to be entirely subsumed into those of the Mycenaean'. This process is seen as absolute when the palace at Knossos, the cultural heart of the Minoan civilization, is taken over by a Mycenaean elite, as seen by a complete shift in administrative records from being recorded in Minoan Linear A to Mycenaean Greek Linear B. This period also sees a shift in focus – at the very least in how Mycenaean wealth is consumed – away from the construction of monumental tombs, towards

⁶ Kristian Kristiansen, "The Rise of Bronze Age Peripheries and the Expansion of International Trade 1950-1100 BC" in *Trade and Civilisation: Economic Networks and Cultural Ties, From Prehistory to the Early Modern Era*. 87-106.

functions that one might describe as more practical for those in the world of the living than the dead. Around this time, a number of different palaces come to be remade in a similar style characterized by Cyclopean architecture. This architectural style involves the placement of massive largely unworked stones together to form structures. The name is applied by later Greek sources, which suggested that the structures must have been built by the mythological Cyclopes, since the blocks could often be so immense in size that it was unthinkable that they were moved by human hands. This architectural style, generally characterized with Greek civilization of this period, does have its antecedents in the monumental building projects of the Hittite empire in this period, and further tells both of Mycenaean connections at this period as well as their cultural tendency towards emulation. It also, however, hints at the ability of the Mycenaean palace state to mobilize massive quantities of manual labor. This style of architecture was implemented in this period to construct new rings of defensive walls in many palace states, exemplified best by those at Tiryns, as well as roads and bridges like those created by Mycenae in this period, which extended along their many terrestrial trade routes in the Argolid.

This period also sees an interesting phenomenon in the interregional politics of the Eastern Mediterranean. As Crete diminishes in influence, replaced by the Mycenaean polities, its place in records of *great kingdoms* made by other Eastern Mediterranean kingdoms of the period comes often to be replaced by the notation of a kingdom referred to in Akkadian as *Ahhiyawa*. This is generally accepted to refer to an archaic form of the name *Achaea*, one of the Homeric names for ancient Greece. This begs the question of what is being referred to as a *great kingdom* in this period. Some have taken this as a hint that the Peloponnese and Crete comprised one political unit in this period with its capital at Mycenae. For reasons that will be fleshed out further in section 2.3, this is unlikely to be the case. It is certainly possible that the region, which

shared a common language and culture, was regarded from abroad as a single land despite being home to a number of independent states, and it would certainly not be the first example of such a situation in human history. What exactly is at work here, however, remains a mystery. What it definitely suggests, though, is that the importance of the Mycenaean polities in the interregional political economy of the Late Bronze Age Eastern Mediterranean was recognized by other states of the period.

This growth and prosperity would continue until the decades surrounding the turn of the 12th century, when many of the palace states would be beset by a series of calamities that would see the destruction of many palace structure one by one. Many of those destroyed would initially rebuild. Some, such as Pylos, however, would be destroyed for good, and those that did persist for a few more decades would either be destroyed again or would slowly dwindle away. By the 11th century, the general geopolitical framework of Greece was no longer centered on the Mycenaean palace, but rather smaller local centers, often tucked away out of site in the rocky hillsides of Greece. These smaller polities were not, like their predecessors, characterized by elite burials of vast quantities of exotica and elite goods, nor indeed did they seem to engage in the wide-ranging trade of such luxury goods. As there was no longer a need for a wide-ranging administrative system, writing in Linear B diminished and finally disappeared, never to return. A few centuries later the archaic *poleis* would rediscover writing in the Phoenician alphabet and begin the development of a new political system. By this time, however, the memory of the Mycenaean palaces was little more than a set of fragmented legends, passed down in the oral poetry that would come to be recorded as the Homeric Epics.

Mycenaean Social Roles and Titles from the Pylian Linear B Sources

Through translation of administrative records in Linear B script, most originating from the region of Messenia under the control of the palace at Bronze Age Pylos, a number of titles have come to be interpreted and their societal roles inferred by scholarship. As will be illuminated in the discussion of Galaty's concept of *Glocalism*, it is important to bear in mind that these titles are derived from sources overwhelmingly found in one polity. This polity was certainly different in many respects, not the least of which being its administrative make up, to other oft discussed palace polities like Mycenae. Bearing this in mind, however, the express labelling of officials and their roles, especially in connection with the classical titles to which they seem to correspond, provides an important insight into the nature of societal order in the Mycenaean palace state.

The first title that appears often in the record is one that appears throughout this paper, due to his place at the top of palatial society. This figure is of course the *wanax*, the king or lord of the palatial state (corresponding to the later Greek ἄναξ : "lord").⁷ Beside the obvious political role that this figure played in society, it is also suggested that he filled a significant religious role in society as well.⁸ Second-in-command to the *wanax* was the *lawagetas*. His role politically and religiously seems to have been similar but much diminished to that of the *wanax*.⁹ It has also been questioned whether there was some military facet to the duties of the *lawagetas*. Though this is unclear, it is mentioned in at least one record that he was taxed with "incorporat[ing] outsiders into Mycenaean society" (Nakassis, 2013: 7). Thirteen figures in the Pylian records are

⁷Nakassis. 6.

⁸ Ibid.

⁹ Ibid. 7.

given the title *hekwetās* (ἐπέτης : “follower”). These figures are often suggested as having military roles, and the genitive form of their title is often found to be in association with chariots and chariot parts.¹⁰ The territory of Messenia at this time was divided into a *Hither* and *Further* province, with each subdivided further into individual districts. Each province had a provincial governor, referred to as the *damokoros*, often translated as “nourisher of the people” (from Attic δῆμος + κορέννυμι).¹¹ Each district in a similar vein had a “nourisher” and a “vice-nourisher,” *koretēs* and *prokoretēs*.¹² All three of these figures were clearly appointed to their provincial positions by the *wanax*. In fact all of the positions yet discussed have been intrinsically connected to the palace system. All these titles, it should be noted, also fall out of use after the collapse of the palace system, completely dying out by the Early Iron Age.¹³

Certain titles, however, are maintained into the Iron Age, and are prevalent in Archaic and Classical Greek society. In the religious sphere, figures are labeled as ἱερεὺς and ἱέρεια, “priest” and “priestess,” as well as κλειδοῦχος or “key-bearer,” and these titles seem to be applied to at least one figure for each district of Messenia.¹⁴ Another title that is often used in the Linear B records does not refer to a single officer, but rather an administrative body: the *damos*. This *damos*, connected to Attic δῆμος “the people,” seems to have held ownership over the agricultural land of Messenia. In this capacity, they were expected to make regular contributions of goods to the palace.¹⁵ This body seems to have been comprised of individual land-holders, given the name *telestai*. Nakassis notes that the nature of this group and the persistence of the title suggest that the *damos* was an important institution to local administration, and truly to

¹⁰ Ibid.

¹¹ Ibid. 9.

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid. 11.

¹⁵ Ibid. 12.

regular daily life. He proposes that this group not only outlives the palace system it interacted with in the Bronze Age, but likely predated it as well, going even further to state that it likely predated Greeks in the region.¹⁶ Perhaps the most interesting figure to the considerations of this paper is that of the *gwasileus*, a title that has been connected confidently to the later βασιλεύς, the Attic word for “king.” Indeed, βασιλεύς is the term that the Athenians used to describe the kings that predated their democracy. It was also the term given to one of their three archons, the *archon basileus*, or “royal argon,” who is understood to have taken over the religious duties of the discarded institution of the king. The *gwasileus* title described in the Pylian documents is not a king of course; the *wanax* is the king. Rather, this term seems to be used to describe a lower, more localized stratum of elite. These elites were not appointed by the palace, but rather seem to have passed their title down patrilineally.¹⁷ They seem to have been directly entrusted by the palace core with the oversight of certain localized industries.¹⁸ Nakassis makes similar claims about these *gwasileis* as he does the *damos*. Their name and role in society suggests that they predate the formation of the Mycenaean palace state, and were likely always an important institutional figure in local administration. They also certainly outlived the palace state as well, and indeed, it seems it is these very same localized elites that fill the power vacuum once more when the palace state collapses.¹⁹ Nakassis offers the due caution that these documents record that information which was important to the scribe to record.²⁰ This inherently means that not all the information about the roles, duties, or identities of the figures which they describe will be recorded, but rather those elements of their duties that impact the palace administration. As to

¹⁶ Ibid.

¹⁷ Ibid. 13.

¹⁸ Ibid. 14.

¹⁹ Ibid. 13.

²⁰ Ibid. 17.

what is included, however, this information does help to understand the various hierarchies and social actors at play in Messenia, and perhaps provides some insight into the general makeup that might be expected in other palace states as well.

2.2 First We Feast! The Excess of Mycenaean Conspicuous Consumption

One could (and indeed some have) fill a book on the topic of feasting practices in Mycenaean society. The importance of this section is not to provide the full scope of how and why the Mycenaean palaces hosted feasts, but rather to garner a basic understanding of how these feasts, alongside the practice of elite burial, served their role as an ever-present institutionalized form of conspicuous consumption. It is important to understand that the great quantities of wealth that were effectively destroyed in these practices were not simple wanton waste. Indeed, had they been such, it would likely have been easier to turn away from them in times of distress and economic want. In actuality, however, these practices of conspicuous consumption served key functions in the elite culture of Mycenaean Greece. They served to legitimize the position of the *wanax*, to generally emphasize the existing socio-political hierarchy, and to create a series of obligations to the palace among the attending populace. Since these societal functions required continued conspicuous consumption of wealth, Mycenaean polities required a continual input of wealth to continue to serve these purposes, which they seemed capable of providing through the exploitation of long-distance trade networks. This constant requirement of economic input to maintain the basic stability of the socio-political hierarchy and legitimacy of the state, however, made the Mycenaean palace states inherently vulnerable when times got tougher.

Much of the information on how palace feasts would likely have looked stems from the physical and textual records of the palace at Pylos. The records there note two particular instances of feasts held by the palace. The first involved the appointing of a public official by the *wanax*, and the second seemed itself to be the initiation of a new *wanax*.²¹ These feasts serve as clear examples for how a feast could function to maintain social stability in a time of change (for instance, the death of a *wanax*) or, in the former case, to display the authority of the *wanax* while engendering change at a lower stratum of the socio-political hierarchy.²² Indeed, the emphasis of various hierarchical strata was ever-present throughout these feasts. Fox describes the likelihood that feasting would have occurred in various halls. The lower strata of those invited to the feast would have been seated in an adjacent hall to that of the *wanax* and his more esteemed guests. There they would likely been served alcoholic drinks at the expense of the palace, but not the feast foods that were being enjoyed within, the scents of which would have floated out to them, a constant reminder both of what privileges they enjoy based on their place in society and, perhaps more importantly, those which are not allowed to them.²³ Those feasting within would have been further subdivided. Based on the remains recovered from the palace's storerooms it appears clear that many guests would have been served food on vessels made of wood. The select few elite, however, would have dined with ornate metal vessels.²⁴ Similarly, whereas most seem to have dined on the beef of sacrificed livestock, the most elite would have dined on game venison, a good clearly highly valued to the Mycenaean elite who often adorned the walls of their palaces

²¹ Rachel Sarah Fox, *Feasting Practices and Changes in Greek Society from the Late Bronze Age to the Early Iron Age*. 37.

²² *Ibid.* 39.

²³ *Ibid.* 38.

²⁴ *Ibid.* 40-41.

with hunting scenes.²⁵ These details all further clarify the importance of highlighting and cementing the standing hierarchy at each feast.

Another important aspect of these feasts was the role they played in forging ties of obligation between the attending populace and the host, the *wanax*. As Fox notes, political feasts such as these serve almost as a sort of gift exchange. The reciprocation of the guest, however, is left open-ended and binding at the end of the night, since the gift he receives from the host is inherently destroyed through its consumption and thus cannot be returned.²⁶ Now one way in which each guest is reciprocating is simply by accepting their lot as it is given at the feast, and thus symbolically accepting the standing hierarchy. Beyond this, however, guests reciprocated as they were capable given their place in society. It has been theorized that one such way that the lower strata did so was by contributing their labor to the massive construction projects for which these palatial polities were famed. This would certainly go a way towards explaining why compensation for such works is never recorded in the Linear B records.²⁷ Through this understanding, it becomes clear just how many state functions were contingent upon the continued ability of the *wanax* to conspicuously consume wealth.

One might wonder then, if such practices of institutionalized conspicuous consumption are so inherently unsustainable in the long run, how did they come to be so prevalent in Mycenaean elite culture? There is no definite way to answer this question, but this paper can propose one suggestion. Elite feasting is a rather common practice among societies that maintain a strong focus on kin-groups. They most often take the form of funerary feasts and serve to emphasize the continued strength and cohesion of the family after the death of a patriarch. In

²⁵ Ibid. 41.

²⁶ Ibid. 44.

²⁷ Ibid. 45.

these cases, the conspicuous consumption of resources in an organized fashion displays that the family can still comfortably dispose of wealth and work together to organize the event. This actually fits quite well with Fox's description of feasting practices in Greece, as the majority of feasts for which evidence remains in the Early Mycenaean Period are indeed elite funerary feasts.²⁸ It is quite possible that the burgeoning Mycenaean polities of the 17th century BCE that first came into contact with Minoan traders and the wealthy trade networks of the Eastern Mediterranean were still such kin-centric societies. As their position between southern and northern trade networks began to afford the elites of these polities access to vast riches, their methods for signaling family strength and cohesion would not have changed entirely. Instead, more and more wealth would be dedicated towards sending these political signals, and thus the bar for what is an appropriate amount of conspicuous consumption would have risen to match the new availability of wealth. Should this be the case, it only further exemplifies how closely the rise and fall of the Mycenaean palatial polities was tied to that of the Eastern Mediterranean international economy, and indeed the larger interregional political economy of the Late Bronze Age.

2.3 Considering Galaty's *Glocalism*

This paper often refers to the collapse of the "Mycenaean system." In doing so it refers to this economic and political system centered on the megalithic "palace" structure, and the *wanax* and his administration, which it housed. This shared system can be seen throughout the mainland Greek polities of the Late Bronze Age. And it does indeed collapse as the Late Bronze Age ends,

²⁸ Ibid. 10-15.

with the Greek poleis of the Early Iron Age being characterized by a distinctly different system. It is, however, important to note that, while this paper focuses on such a system as a singular entity, the Mycenaean polities were independent entities, and they each had their own administrations that differed notably, sometimes starkly. Therefore, this paper will provide some attention, before continuing on to the process by which the Mycenaean system collapsed, to discussing the unique nature of the polities. Following the lead of a recent work on the subject by Michael Galaty, it will do so by examining the key differences between the two most often discussed palace polities: Mycenae and Pylos. The understanding born out in this section should be maintained throughout the discussion of Mycenaean collapse to better understand how each polity collapsed with the larger collapse of the palatial system. What will also be clear, though, is that while the unique situation of the various Mycenaean polities would have allowed some to hold on longer than others, none could survive into the Iron Age as a palatial economy.

What is “Glocalism”

So what does Galaty mean when he describes the Mycenaean palatial polities as having *glocal* concerns? The etymology of the term is rather simple, it being a conglomeration of the terms *global* and *local*. It defines those *local* decisions that are affected by, and affect, their interregional and international context.²⁹ The point of viewing the political economies of the palatial polities from this level of observation is to understand both how the nature of the international system of the Late Bronze Age Eastern Mediterranean affected the workings of the Mycenaean polities and how the individual local contexts of the polities informed their

²⁹ Michael L. Galaty, “Mycenaean Glocalism.” 143.

involvement in the international system. To examine how *glocal* concerns operate in any given situation, it is necessary to understand both the local and interregional context. A large part of understanding the former, especially in the case of the Greek mainland is the understanding of the region's geopolitics.

The geographical situation of the Greek mainland informs a rather unique political situation in the Eastern Mediterranean. It is no coincidence that both in the Bronze Age and in the Classical period, the political landscape of Greece is characterized not by sprawling empires but rather by a peppering of smaller independent city states throughout the valleys that lie at the foot of the region's many mountains and hills. The region is naturally divided into various sub-regions, where agriculture was possible, most separated from each other by imposing natural impediments. The average condition of Greece is also characterized by its being resource poor. It is no mistake that the so-called *Mediterranean triad* came into being in the ancient Peloponnese. Crops like grapes and olives, despite their own difficulties, are crops that can still thrive in hot dry climates. Furthermore, other than marble, which is rather heavy and difficult to trade long-distance even if there should be demand for it, the whole of Greece has few natural luxuries to offer. All that being said, the various sub-regions of Greece can differ greatly in this regard.³⁰ Some could support more fruitful and often harvests than other. Likewise, some regions commanded access to other high-demand resources, such as the copper that would have likely been mined at Laurion in this period.³¹ Such differences would have set up different polities in different situations from the beginning, not only advantaging some over others, but also directing

³⁰ Ibid. 146.

³¹ Kristiansen, "The Rise of Bronze Age Peripheries and the Expansion of International Trade 1950-1100 BC." 106.

states towards varying courses of action in their pursuit of systemic success in the Late Bronze Age.

Concerning the general connection of the Mycenaean polities to the larger interregional and international system of the Late Bronze Age Eastern Mediterranean, it must be noted that the Greek city-states served to gain primarily from their engagement in the trade demand of the Eastern Mediterranean great kingdoms. It is once more no accident that Mycenaean polities are orientated towards the south east, to these polities and, originally, to Crete.³² The rise of many Mycenaean city-states to the level of wealth and power that they reached before their collapse is likely due to their very location, between the elite center of the Eastern Mediterranean, and the sources of prestige goods and resources, which they demanded, to the north.³³ Of course, this too, as will be shown, differs between city-states, both in regards to the degree to which each palace state engaged in foreign trade, and where their trade contacts were. Of the three sites, from which the vast majority of Eastern Mediterranean exotica have been recovered (Mycenae, Tiryns, and Thebes), each seemed to reflect particular connections to certain region, with Mycenae being the site with the majority of Egyptian objects, and Thebes the home of a curious stockpile of Mycenaean cylinder seals.³⁴ Of course, with whom and to what degree each palace polity traded could have affected greatly the way in which they dealt with the exogenous pressures of collapse.

³² Galaty, "Mycenaean Glocalism." 149.

³³ Kristiansen, "The Rise of Bronze Age Peripheries and the Expansion of International Trade 1950-1100 BC," in *Trade and Civilisation: Economic Networks and Cultural Ties, From Prehistory to the Early Modern Era*. 143-171.

³⁴ Eric H. Cline, "Rethinking Mycenaean International Trade with Egypt and the Near East," in *The Rethinking the Mycenaean Palace II*. 191-194.

“Glocal” Concerns in the Differing Development of Pylos and Mycenae

It is particularly important to apply this *glocal* lens, as Galaty rightfully does, to the differing situations of Pylos and Mycenae, especially when one seeks to understand how the Mycenaean palaces would have functioned as political economic centers. This stems from the present evidence that allows us to postulate what these palace states were. There are two primary fonts of evidence from which we form a picture of the Mycenaean palatial polity: physical remains and textual information. Much evidence of the former sort is taken from Mycenae and the surrounding region for the very reason that the site of Mycenea has a wealth of remains to work with. This is especially the case for evidence taken from elite burial, due for the most part to the treasures uncovered in the site’s two famous Early Mycenaean shaft graves. From these two graves alone, for instance, it becomes clear that the Mycenaean elites of this period had access to resources as far flung as the great kingdoms of the Eastern Mediterranean and the burgeoning elites of the Baltic Sea region. As it concerns the textual sources, Pylos commands a variable monopoly. Nearly all Linear B tablets that have been discovered and translated have been found at the *Nestor’s Palace* complex in Pylos. This of course poses the issue that any understanding taken from these tablets, as to how palace administration functioned, or to what degree the state or private entities controlled commerce, or any other aspect of state function, can only certainly be said to describe the policies of Pylos and may not actually reflect a standard among Mycenaean polities.

How then did the *glocal* concerns of these two polities differ? Actually quite drastically. Right from the beginning there is a key difference in the geopolitics of the two sites. Each site, like most throughout Greek antiquity, is located in a fertile plain hemmed in on multiple sides by high hills and mountains. Each of their regions also has at least one port from which they could

access the sea and conduct long-distance trade. However, as alluded to earlier, the quality of the two regions with regard to their ability to produce fruitful harvest differed. The Argolid, which Mycenae shared with other polities such as Tiryns, Midea and Bronze Age Argos, allowed for ample resources to support all the polities it housed. In Messenia, on the other hand, where Pylos was established, the situation was quite different. Overall, the soil in Messenia was not of very high quality for agriculture, and where high quality soil could be found, it was in the hinterlands, away from the palace center of Pylos.³⁵ Right from the start, this directs these two polities towards differing focuses and decisions. It is likely due in part to this difference in geopolitical context that, as Galaty argues, Pylos chooses to focus on gaining control over the whole of Messenia, serving as the political and economic center of the region, where Mycenae more likely formed cooperative relationships with the other palatial polities of the region. Mycenae's ability to serve as the economic center of the region then likely had more to do with natural trade flows than with a conscious effort to dominate the region.

These are just a couple of the inherent differences between the situation in Messenia and that in the Argolid. However, simply in regards to these few aspects there can already be seen to sprout a number of differing effects, both in regards to the degree to which each polity focused on either their local or global interests, and to how those global interactions manifested. As Galaty notes, Pylos seems to make an early and concerted effort to control the entire region of Messenia. To accomplish this, they had to continually direct energy to keeping the region under control by creating and administering a network of local centers throughout the Messenian hinterland.³⁶ This drew focus away from engaging in trade. And indeed, far fewer examples of

³⁵ Galaty, "Mycenaean Glocalism," 152.

³⁶ Ibid. 157-159.

exotica have been found in Messenia than in the Argolid. The trade that Pylos did engage in likely focused on two particular destinations: Crete and the Adriatic. On the other hand, the Argolid states never had to invest energy in controlling the region, and instead would have seen more to gain from edging each other out in trade profits. Unfettered in this regard, they could focus the majority of their energy on deriving profit from long-distance trade. Mycenae, like Pylos, seems to have traded extensively with Crete. They also, however, had unique connections with trade partners to the north in the Balkans. This made them perhaps the sole provider of gold from the Carpathian mountain range and amber from the Baltic region to Eastern Mediterranean markets. The two shaft graves at the Palace of Mycenae contain some clues to the profit that was to be reaped by these trade networks.

Importance Moving Forward

The point of taking time to get a small idea of the individual differences of the various Mycenaean palace states is that any attempt to fully understand what these polities were and how they operated must be nuanced. Mycenaean polities have often been referred to as highly centralized states, with the *wanax's megaron* at the center and regional centers controlling the affairs of the hinterland. A number of titles have been taken from Linear B tablets and applied to various positions in society, from a secondary official known as a *lawagetes*, to an order of *equites* and various *basileis*. In this case, however, much of the prevalent understanding of the standard organization of a Mycenaean state is derived from the administrative records of Messenia. Therefore, it is a difficult matter to attempt to impose the order of Pylos onto another palace. If one were to accept, for instance, that any given region in Greece should be controlled

from a given point, they might be led to believe that the Argolid was a single kingdom with Mycenae as its capital. For the reasons already discussed, and the simple fact that it is hard to imagine that the massive fortification of Tiryns, with its own palace and *megaron*, served simply as a regional outpost for Mycenae, this is quite unlikely to be the case. Likewise, the general dependence of the palace state on long-distance trade as a steady source of profit, which will be discussed at length in this paper, would certainly also have differed. In the dichotomy chosen by this chapter alone, it can be seen that Mycenae invests much more in long-distance trade than does Pylos, and thus too stands more to lose from its failure. This can help to explain why when economic catastrophe does strike, certain states are able to weather the storm for longer than others. This understanding of how the Mycenaean palace states were inherently distinct from one another should help to inform the conversation of how they were similar and why despite falling at different dates, and sometimes to different direct impetuses, they all collapsed along with the system they comprised.

Chapter 3

Internal Susceptibilities and Introspective Explanations

Having discussed the nature of the Mycenaean palace states and the functions they served, it should come as no surprise that they both individually and as a constellation of interconnected polities comprise what is known as a complex system. The administrative centers at the core of each polity were clearly tasked with carrying out any number of tasks, the engaging of warfare, organizing of large scale public infrastructure projects, and the strategic redistribution of resources to and from the core and periphery being only some of the most obvious to us. As a complex system engaging in such a spectrum of activities, it is inherently unstable. All complex systems are. No system, after all, has persisted throughout the span of known history. Many explanations exist for why this is the case, two of the most compelling and relevant of which will be considered in this chapter.

It is all too easy to blame the introduction of some alien or outside force for the collapse of a seemingly robust system. One need only look to the multitude of theories offered for the collapse of the Roman Empire, from the arrival of barbarians to that of Christianity, to see the allure of such theories. The fact of the matter is that complex systems are fully capable of undergoing collapse all on their own. This chapter will explore general theories on the nature of complex systems and their tendency to collapse. It will then explore how the application of such general theories to the situation of the Mycenaean palatial system would look, and how the implications of these theories contributed to its collapse.

3.1 Joseph Tainter's *Complex System Collapse Theory*

Joseph Tainter's 1988 *The Collapse of Complex Societies* is among the most oft cited publications on the issue of collapse and what would come often to be referred to as *complex systems theory*.³⁷ Tainter examined a great number of historic and prehistoric civilizational collapses and the existing theories on *why* they collapsed, and in doing so he sought to identify a general process that would have played out in all complex systems. The theory he developed towards this end borrowed from the generally accepted theories of economics, namely those of *diminishing marginal and average returns*, to explain the pattern by which states gradually grow and suddenly collapse.

Complexity and Collapse

To understand a theory on how and why complex systems collapse, it is necessary first to set the terms of what is being discussed, in this case *complex systems* and *collapse*. Tainter does well to set parameters for what he means when he discusses both of these elements. First, what does it mean when a system collapses? The term *collapse* certainly has a strong connotation. It evokes images of sudden destruction and once great cities lying in ruin and rubble. The collapse of a system is, however, more nuanced than simple destruction. In Tainter's mind, systemic collapse was a *political process*. He notes that the it often has its ramifications in the world of art, literature, architecture, and all the other aspects we imagine falling away after a collapse, but

³⁷ This work came on the heels of much discussion over the usefulness of such means of analyzing *Systems Collapse* as Renfrew's discussion of *catastrophe theory*. Though these models at first glance substantiate points like those made by Tainter, that little to no external impetus is necessary to bring about the collapse of a complex system, they have since come under much criticism. This is largely due to two factors, (1) the fact that while seemingly doing well to model general trends, they offer little to explain an given instance of collapse, and (2) they rely heavily on the application of neo-evolutionary anthropological theory to archaeology. See Yoffee, 2005: 22-41.

these are secondary consequences to the political process at play.³⁸ His exact description of collapse is as follows: “a society has collapsed when it displays a rapid, significant loss of an established level of socio-political complexity” (Tainter 1988: 4). This simple quotation carries two key prerequisites, which he further notes. First, the level of complexity preceding the collapse must have been *established*. He uses the fall of the Carolingian Empire as example of a process that does not fit the parameters of a collapse, since the territorial empire did not survive the death of its first king. It is then in his opinion more an example of failed empire building than of collapse.³⁹ The second prerequisite is that the decrease in complexity must occur swiftly and starkly. A gradual simplification of a system is better defined as *decline* than collapse, as would a relatively minor decrease in socio-political complexity.⁴⁰ Tainter makes particular note that any level of complex system can undergo collapse, in which case the degree of the decline in complexity that marks the process as a collapse must be understood in relation to the preexisting level.⁴¹ Of course, this very definition demands another: what does it mean for a system to be *complex*?

In Tainter’s view, a complex system is evidenced by the existence of two key factors: *inequality* and *heterogeneity*.⁴² Inequality is a rather simple idea to understand. To give it definition within the framework of a socio-political system, Tainter refers to it as, “vertical differentiation, ranking, or unequal access to material and social resources” (Tainter 1988: 23). Heterogeneity is perhaps less obvious and best understood by its inverse. Heterogeneity deals with, “the number of distinctive parts or components to a society, and at the same time the ways

³⁸ Joseph Tainter, *The Collapse of Complex Societies*. 4.

³⁹ *Ibid.*

⁴⁰ *Ibid.*

⁴¹ *Ibid.*

⁴² Tainter, 23.

in which a population is distributed among these parts” (Tainter 1988: 23). When these entities are evenly distributed, *homogeneity* is present in the system. Heterogeneity is the inverse of these conditions.⁴³

The Mycenaean system then fits Tainter’s understanding for a complex system that collapsed. The 12th century BCE sees the socio-political system of mainland Greece go from one centered on large administrative complexes, in which an elite few commanded unthinkable quantities of wealth and resources, to one nearly devoid of large settlements, favoring instead dispersed, self-sufficient localities. Clearly, a complex system was present, and within a generation or two, it was gone, collapsed.

On the Nature of Complex Systems and Their Collapse

Tainter’s theory on why complex systems collapse is based off four presuppositions of their nature, which he defends at length in the former half of his book. They are as follows:

1. human societies are problem solving organizations;
2. sociopolitical systems require energy for their maintenance;
3. increased complexity carries with it increased costs per capita; and
4. investment in sociopolitical complexity as a problem-solving response often reaches a point of declining marginal returns.

(Tainter 1988: 93)

This skeleton provides Tainter’s framework for treating complex systems like any economic process. As he condenses in his above quotation, the complex systems in question here are machines that output solutions to societal problems at the cost of energy input. This energy unit, which Tainter uses, is a general reference to the capital needed to effect change in a system,

⁴³ Ibid.

generally resources or material wealth. In Tainter's view, complex systems grow in for the very reason that they are entities created to solve societal problems. When a new problem need be addressed, the system develops a new capacity to do, at the cost of upkeep to the new faculty. For instance, if a system needs to feed skilled laborers that are not directly working the fields, it may develop a means of redistribution, which in turn may call for the emergence of a redistributive administration. An administration is built up to handle food redistribution and a scribal class comes into being to keep records on inventory and transaction. All these new entities require their own continual upkeep. In short, they must be paid for. This naturally leads into this third point: that complex systems become more expensive per capita as faculties such as the example above compound upon one another. It is notable that these additional capacities are rarely easily pulled back. For instance, once a bureaucratic class is created, it is difficult to disintegrate said group if their benefits ever come to out-weigh their costs. Now a whole group of society depends on the existence of a bureaucracy, not just those who serve in those roles, but their families and anyone else who depends on the transaction of resources or *energy* with these groups. This issue comes to a head in the light of Tainter's final point: complex systems suffer from the economic issue of diminishing returns.

The concept of diminishing returns, typically *diminishing marginal returns*, is central to the study of economics. It refers to the idea that there exists a point in any profit-making strategy that further investment will begin to yield fewer and fewer benefits or returns. Tainter explains how this concept plays out in complex systems in regards to a number of faculties, including *agriculture and resource production, information processing, socio-political control and specialization, and overall economic productivity*.⁴⁴ This paper will not dwell on how all of these

⁴⁴ Tainter, 94-109.

play out; only consider that the concept of diminishing returns is widespread in Tainter's theory. Taking the realm of resource production as the easy example, diminishing marginal returns can be observed as follows. When a new vein of a minable resource, say gold, is discovered, it often does not require too much work to extract it. Indeed, it can be as easy as picking up pieces from the bed of a stream, as was the case with the first to find gold in the American West. At this point, investing more energy into establishing a proper gold mine will yield higher returns. With time, however, as the easiest gold to extract is mined first, that which is left must be extracted from deeper and deeper in the earth, and the infrastructure needed to extract must not only be up kept but expanded as well. The process is thereby one in which the costs of extracting the resource are increasing and the resource is become scarcer and scarcer. Therefore the return on the same unit of energy invested into extraction is ever decreasing.

Tainter sees this as a process that is always playing out in complex systems, in any number of realms. It is important to note that this underlying process is not entirely fatalistic. Even given diminishing returns, collapse can be abated through the direct injection of new energy into the system (through the discovery of a new resource, the taking of resources from a neighboring system, etc.) or through energy saved by innovation. In fact, he concludes his book by making this point in reference to the current global system, which has seen continual growth through the seemingly exponential growth of technological progress.

Application to the Mycenaean Collapse

Before this paper explains how the general theory proposed in *The Collapse of Complex Societies* applies to the Mycenaean collapse, it briefly notes that the book did take a one

paragraph aside to make note of an already existing theory on Mycenaean collapse. It centered on the idea that a localized climate event pushed populations out of the Peloponnese, where most Mycenaean polities were situated, to Attica, where populations actually grew following the collapse of most of the polities to the south.⁴⁵ This theory is insufficient for a number of reasons, the simplest and most obvious of which is that complex systems *are* problem solving entities, and they exist partially to provide stability in times of otherwise instability, such as periods of climate change. In keeping with this understanding, climate and weather events have plagued civilizations throughout time, but not all climate events precede collapse, in fact few do. The more likely role of a real climate event in the period will, however, be considered in much greater detail in chapter four.

So then, how does this theory apply to the Mycenaean Greek polities of the Late Bronze Age? I would argue that the most important aspect of Tainter's theory in the understanding of the Mycenaean collapse is its central understanding that complex systems require energy to function, and the more complex a system is the more energy per capita is required. If one considers that Tainter defines the complexity of a system by the degree of its inequality and heterogeneity, it must be noted that the Mycenaean polities were certainly highly complex. The question then arises of how they were able to pay for this complexity. In particular, whence did Mycenaean states like Mycenae itself derive the means to build wide-spanning roads, bridges, and elaborate tombs in the labor-intensive manner that they did, or the wealth to consume through elaborate burial and lavish feasting? Greece lacked the arable land of the fertile crescent and the Nile valley, and at the time few luxury resources were available in the immediate era at the time. Instead, the wealth, resources, and energy involved in these processes, and indeed in propping up

⁴⁵ Tainter, 49.

the very Mycenaean system, would have been streaming into the Mycenaean polities from outside. This certainly occurred through trade, and if the obsession of the Mycenaean elite with warrior burials is any clue, raiding probably played some role as well. In short then, the Mycenaean polities, in the context of Tainter's theory, can be seen as highly complex systems that were able to outgrow the natural carrying capacity of their territory. They were able to accomplish this by playing the role of the middleman, facilitating long-distance sea-based trade with the other great powers of the Eastern Mediterranean. The existence of amber and vast quantities of gold in early Mycenaean burials suggests that they may even have engaged in trade to the north (given that amber would have only been available in the Baltic, and thus would have been traded over terrestrial trade networks in Eastern Europe). What this indicates is that the Mycenaean depended on constant external energy input from systems that they could not directly control. This meant that there was little that they could do if these external sources of energy were to dry up.

3.2 Scott A. J. Johnson's *Social Hubris Theory*

Jumping three decades from Tainter's 1988 work on the collapse of complex systems, I find it now prudent to turn to a more recent addition to the study of collapse: Scott A. J. Johnson's 2017 *Why Did Ancient Civilizations Fail?* If Tainter's theory was an explanation of the mechanistic processes that lead to the tendency of complex systems to collapse, Johnson's theory of *Social Hubris* illuminates the equally potent force of individual and social agency in societal collapse.

What is Social Hubris?

As noted above, the principle purpose of Johnson's *Why Did Ancient Civilizations Fail?* is to assert that there are social factors at work that act in concordance with other mechanistic and external factors to bring about a societal collapse. His work agrees with the opinion of this paper that a mono-causal explanation is rarely if ever sufficient to explain the reason behind the collapse of an ancient civilization, and his concept of hubris is simply an explanation pertaining to the *social side of a complex system*.⁴⁶ But what is *social hubris*, and how does it pertain to the collapse of civilizations? Here Johnson seems to borrow from the misused, literary understanding of the term *hubris*, citing it as, "excessive pride or arrogance" (Johnson, 2017: 2). Hubris at the societal level to Johnson is an intentional turning away from the intrinsic instabilities of a system and a refusal to adapt preemptively in the face of potential collapse. As he puts it on the very first page of his work, "ignoring weaknesses within our system guarantees our collapse" (Johnson, 2017: 1). In his view, it is not right to assume that ancient societies were too primitive to be cognizant of the various problems with their systems. Equally, it must have been apparent to civilizations of the past when situations were changing for them.

Yet, there is a natural tendency for societies not to act on these understandings. Instead, he argues, systems have a tendency to erect barriers to change.⁴⁷ There are a number of reasons

⁴⁶ Scott A. J. Johnson, *Why Did Ancient Civilizations Fail?* (2017: 4): "Many collapse-focused arguments hinge on a single point: the economy or the environment, for example. While you might think that the idea of hubris is my own hobby horse, I see it as just the social side of a complex system."

⁴⁷ Johnson, 3.

why this is this case. Johnson notes *relative norms*, or the preference for the familiar over the seemingly exotic, *norms of modesty*, and *fatalistic outlook*, to name a few.⁴⁸ Another fundamental reason for this tendency is the psychological tendency for humans to prefer the apparent assurance of strategies that had garnered repeated success in the past over the promise of better strategies for the future.⁴⁹ Therefore, societies lean on concepts like *tradition* to justify their perpetuation of the same strategies, until it is too late to successfully adapt to the new situation, at which point society undergoes collapse. Johnson's discussion rightfully places particular emphasis on the fact that systemic collapse is rarely a complete destruction of everything and everyone. Instead, it is the elite at the center of the system that fall away in a collapse, while, "the ordinary citizens tend to muddle through transitions and adapt to the new normal" (Johnson, 2017: 7).

The idea of *Social Hubris* then is really quite simple. Those capable of making decisions within a system always have an ability to affect how their system will react to the threat of collapse. Any given society may face a different set of external or internal pressures that threatened to bring it to an end, and these varying pressures may demand adaptations that also vary, both in respect to quality and magnitude. However, due to a built-in resistance to change, societies rarely attempt to adapt at all. And so, Johnson postulates, they collapse.

Social Hubris in the Mycenaean Civilization

Given Johnson's description of *Social Hubris*, it seems rather apparent that such a process was indeed at work in the case of the Mycenaeans. To illustrate how this is the case, it is

⁴⁸ Ibid.

⁴⁹ Ibid.

first necessary to reflect on what the weaknesses of the Mycenaean system were and who had the decision-making capacity to address them. The weaknesses of the Mycenaean system were certainly those discussed previously in Section 3.1. The Mycenaean palace-states likely grew to the level of power and grandeur that they did because they were able to tap into a seemingly constant source of wealth, largely by means of facilitating long distant trade networks. The Mycenaean elite leveraged the sudden newfound wealth to legitimize their standing at the top of the new socio-political system, by strategically squandering it. The entire elite Mycenaean culture that dominates the archaeological remains of the civilization was based off the exchange and consumption of great amounts of wealth, made possible by the steady inflows of wealth to mainland Greece that the prominent Mycenaean polities had forged. Such a system as this could not be imagined to function forever, let alone survive the pressures of the 12th century BCE. It was a system designed in a period of immense economic surplus. Furthermore, it derived its surplus from a paucity of sources. At some point this flow of wealth would have to be cut off.

In keeping with the expectations of *Social Hubris* theory, there is no evidence that any efforts were made to differentiate the sources of wealth acquisition in any of the Mycenaean polities, nor did they ever seem to turn away from their highly wealth-demanding traditions of political legitimization. In some places, it seems that the pressures of the period prompted local leaders to double down on their conspicuous consumption. The aforementioned example of the massive cyclopean walls at Tiryns serve as prime example of this behavior. Of course, the question of exactly *what* adaptations the Mycenaean polities could have adopted to avert their final disaster is tantalizing, yet it is ultimately unnecessary, since they did not take the first necessary step towards adaptation: recognizing the existence of the system's weaknesses.

When the Mycenaean system finally did collapse, it was, as Johnson would have predicted, a collapse of the center. After all, the system that collapsed was that of the Mycenaean palaces and the elites that occupied them. The large-scale depopulation that followed the fall of the palaces is equally to be expected. It is almost certainly not due to death, but more so to migration. The very same wealth that perpetuated the Mycenaean palace system allowed palatial polities to support a greater population than the natural carrying capacity of the region. After all, the Peloponnese is no breadbasket. These migrations are potentially supported by physical evidence, such as the increase in the population of nearby polities like Athens and the emergence of material culture reminiscent to that of the Mycenaeans in places like the Levant.⁵⁰

3.3 Middleton's Understanding of Collapse

One of the most recent advancements in the discussion of collapse is Guy Middleton's *Understanding Collapse*. The focus of his work lies squarely on understanding the *what* and *how* of collapse, and to provide context and clarity to historic and prehistoric instances of collapse. Unlike Tainter's work on *Complex Systems Collapse*, which has been discussed, and Diamond's more *ecocidal* approach to general collapse theory, Middleton's approach provides no *grand theory* for why collapse happens.⁵¹ What it does provide is a critical view of such grand theories, as well as a discussion of popular approaches to the idea of collapse, especially those that have taken place since the 1988 contributions of Tainter and Yoffee & Cowgill. Thus, rather than give

⁵⁰ See Maier and Hitchcock, 2017, for discussion on the potential presence of Mycenaean migrants in the early Iron Age Levant.

⁵¹ As Middleton explains himself in the opening of his book.

an additional introspective explanation for collapse, Middleton offers an essential context for and critique of theories such as those previously considered.

Why Collapse Is Confusing

Middleton's first chapter introducing collapse gets right to explaining why collapse as a phenomenon has been historically so difficult to pin down, and why so many oversimplified theories have been offered in the past. For instance, comparison is often employed to show how one collapse resembles another, or the collapse of one entity can inform that of another. Yet, as he notes, these collapses can occur at different levels of scale and it is important to understand what exactly is collapsing in a collapse event. Middleton identifies five groups capable of collapse:

1. Individual communities
2. Political units
3. Cultural units
4. Systems
5. Populations⁵²

This clarification becomes immediately important when applied to an actual example of a collapse that draws the attention of scholarship. Take the collapse upon which this paper focuses, for instance. Much of the focus of this paper is placed on the collapse of the palace *system* in Bronze Age Greece. Entailed in this discussion as well, however, is the fall of the *wanax* figure as figure at the top of the socio-political hierarchy, the abandonment of sites like Pylos and Messenia at the end of the Bronze Age, and the end of elite cultural practices such as excessive conspicuous consumption of wealth. Under this typology, each can be investigated as its own,

⁵² Guy D. Middleton, *Understanding Collapse: Ancient History and Modern Myths*. 23.

though interrelated, instance of collapse. Doing so allows for a closer analysis of some of the confounding factors of the Mycenaean collapse, such as the fact that certain populations, like that of Tiryns and Athens, increase while others are entirely collapsing, or the fact that certain traditions like language and religion persists while others, like those tied to the societal elite, collapse.

Middleton continues to discuss the question of *why* collapse occurs, by engaging with those theories that have drawn the most public attention in recent decades. He begins by briefly discussion Tainter's contribution of general *Complex Systems Collapse Theory*. In Middleton's view, the most valuable contribution of this theory is that collapse is not necessarily a termination or catastrophe, but rather is itself an adaptation that allows for the smaller societies that tend to follow the collapse of the larger system to better face future challenges and perhaps develop their own greater complexity over time.⁵³ He notes, however, that this theory is lacking in that any given instance of collapse that it discusses still requires a direct impetus to bring it about. Thus, even if one accepts the underlying destabilizing processes that Tainter proposes, it can hardly serve as a general model for why systems collapse.⁵⁴ The other collapse explanation that is has drawn a lot of attention and is currently seen as the *in vogue* explanation for collapse is that of environmental shift or degradation. As just such a factor will be discussed in detail in this paper, it is important to note some of the inherent issues with theories that place primary focus on the environments role in political collapse. The first issue that must be understood is that these theories align with a pertinent issue facing our modern society. Discussions of collapse, as Middleton notes, often wish to provide some warning for how past situations should

⁵³ Ibid. 30.

⁵⁴ Ibid.

inform our present day choices (as will be seen, this paper is not immune to this tendency).⁵⁵ It is important that this relation, however, does not prompt an undue focus on climate as a causative factor. In actuality, the environment is rarely the sole causative factor of collapse, and when it does play a role in collapse, it is difficult to trace its effects. This is drawn from the fact that changes in global or extra-regional climate trends affects the proximate weather effects of different locations in different ways.⁵⁶ Furthermore, when climate data is able to show clear trends, it can be difficult to pin down the dates of these trends.⁵⁷ This can be seen in the new environmental data discussed in section 4.1, where the start dates of climate trends can often only be pinned to a multi-decade span and the total duration of climate effects are also less than entirely clear. Thus any discussion of climate's role in collapse must be viewed in the context of other factors at play, and any general theory that places sole focus on climate change or ecocide should be regarded with some skepticism.

Finally Middleton reiterates a core principle of collapse: it is complex and heavily influenced by chance. He cites Cline's conclusion in regards to the collapse of the Eastern Mediterranean Interstate System of the Late Bronze Age. Cline's final remarks on the subject are simply that a host of proximate and ultimate factors were involved in the collapse of the Late Bronze Age Eastern Mediterranean system, certainly more than have even yet been compiled and described. Furthermore, considering all those factors that have been compiled, it is impossible to determine which were critical in bringing down the larger system and which simply were not.⁵⁸ To better explain the role of chance, he references Herbert Kaufman's contribution to Yoffee and

⁵⁵ Ibid. 10.

⁵⁶ Ibid. 31

⁵⁷ Ibid.

⁵⁸ Eric H. Cline, *1177 BC: The Year Civilization Collapsed*. 170.

Cowgill's 1988 work on collapse, *The Collapse of Ancient States and Civilization*, wherein he concludes by noting that one ought not place too much focus on the decisions of individuals or on the gradual decline of a system. Sometimes a single unexpected event can spell the end of an otherwise healthy state.⁵⁹

Resilience in Relation to Collapse

Middleton also commits a section of his introduction to the discussion of a concept that is becoming more and more prominent in collapse discussions, *resilience*. It was this very concept that McAnany and Yoffee return to again and again in their own introduction to their volume on collapse, *Questioning Collapse*. Resilience at its most basic seems to refer to the opposite of collapse, describing the manner by which states and civilizations can persist rather than fall. In actuality, though, it is just as difficult of a concept to pin down. As Middleton describes, a society might be described as resilient when it is able to absorb external shocks, while maintaining some key *essence* of itself. States that lose that *essence* may instead be said to collapse.⁶⁰ Viewing societies through this framework, McAnany and Yoffee note that resilience is not the exception, but rather the rule for most societies.⁶¹ They note Eisenstadt's own view that in truth civilizations rarely collapse, at least not in the total sense that the term *collapse* often comes to connote.⁶² Certain aspects of society do change, and sometimes this change can occur

⁵⁹ Herbert Kaufman, "Collapse as an Organizational Problem," in *The Collapse of Ancient States and Civilizations*. 233-235.

⁶⁰ Middleton. 41.

⁶¹ McAnany and Yoffee, "Why We Question Collapse and Study Human Resilience, Ecological Vulnerability, and the Aftermath of Empire," in *Questioning Collapse: Human Resilience, Ecological Vulnerability, and the Aftermath of Empire*. 11.

⁶² Shmuel N. Eisenstadt, "Beyond Collapse," in *The Collapse of Ancient States and Civilizations*. 241.

at a seemingly catastrophic pace. The central, or *great traditions* as they are often referred to in the literature, of a society often prove to be more resilient and change at a more gradual pace.⁶³ Likewise, when seemingly catastrophic change does occur it often effects the most visible members of society, the elite that leave lasting evidence of their existence to be interpreted.⁶⁴ This invisibility of the sources leads to these periods following identifiable collapses as dark ages. These periods are often, however, better examples of resilience and adaptation, to return to Tainter's vocabulary, than they are periods of despair and want. This general trend can certainly be seen in the case of the Mycenaean collapse, where the subsequent period has indeed been long referred to as the "Greek Dark Age." In this case as well, while the highest stratum of the elite hierarchy fell away, and certain population centers fell away, other elites grew in power in this so-called "dark age," and as we have seen, other centers have grown. It can hardly be expected that the quality of life for the average person living in this period would have been all that worse from those of the preceding period. This is important to remember when discussing what exactly the collapse of the Mycenaean system actually was.

In concluding, Middleton offers a final general critique that the events of the past should not be seen to be any more fantastical than those of the past. Grand theories that propose elaborate and extravagant reasons for collapse should be treated with general caution and skepticism. In general collapse, in his view, is precipitated by the simple coincidence of three factors: (1) structural instability, (2) inadequate human responses, and (3) unexpected triggers.⁶⁵ The ensuing collapse, however, is rarely ever total, but rather a reorganizing of the system in order to be better adapted to future stressors.

⁶³ McAnany and Yoffee. 10.

⁶⁴ Middleton. 46.

⁶⁵ Ibid. 366.

Middleton on the Mycenaean Collapse

Middleton's first introduction into the study of collapse, as he describes it, came with the very collapse upon which this paper focuses, that of the Mycenaean Greek Polities of the Late Bronze Age. His examination of the Mycenaean Collapse takes into account many of those external stressors which this paper will enumerate, and it is thus important and helpful to discuss briefly the context, which his discussion of the collapse provides. Middleton notes, as has been discussed, that the systemic collapse in Greece at the end of the Bronze Age is one that pertains overwhelmingly to the elites. He enumerates those practices that fell away as including the seeming high arts of monumental building, fresco painting, and ivory working, the construction of luxury goods, and the use of Linear B writing and seal stones.⁶⁶ What certainly survived this collapse, however, included the use of Greek language and the worship of certain gods (such as Poseidon, Athena, and Dionysus).⁶⁷

He goes on to discuss climate change centered theories on collapse, referencing the recent discussion of the subject by Kaniewski in particular. In his Middleton's view, such theories tend to be lacking because they assume that Mycenaean palace states were particularly dense and that these dense population centers were disrupted by inability to provide food to the populace. There is, however, little evidence to say for certain that these palace centers were in fact densely populated, and regarding their ability to feed the populace, he notes that he is skeptical due to the lack of any mention of this in the Linear B records.⁶⁸ As noted in Section 2.3, however, how much information can be taken from what is or is not in the administrative Linear B records is

⁶⁶ Middleton. 134.

⁶⁷ Ibid.

⁶⁸ Ibid. 136.

still in question. He also notes, as in his introduction, the lack of any means of pinpointing the dates of climate change data. He questions why, following the chronology given by Drake, if the archaic and classical Greek societies grew to population levels, which he postulates to be likely higher than those of the preceding Bronze Age polities, during a still arid climatic phase, why did they not face the same issues that their predecessors did.⁶⁹ Following this line of reasoning, he concludes that environmental change, in his opinion could not have played a central role in the collapse of the Mycenaean polities. He does, however, note that regardless of larger climatic trends, a simple instance of bad luck, providing just a few consecutive years of bad harvest, could have caused real trouble for a palace state.⁷⁰ This possibility is always important to bear in mind, though one must wonder than why a number of polities all decline or collapse around the same time on the Greek mainland.

He also places some focus on a proximate causative factor that will not have a section devoted to it in this paper, though it is an ever-present suggestion for any Aegean collapse phenomenon, that factor of course being earthquakes. The reason for its frequent discussion in this regard is also a real reason to discount the theory: earthquakes are common occurrences in the Aegean region. They always have been and they still are today. This being the case, however, one must expect, as Middleton notes, that the people of the Aegean must have been used to the occurrence of earthquakes by the time of the Late Bronze Age collapse.⁷¹ The question then remains, even if the destruction of certain sites were directly tied to an earthquake event, why would the inhabitants of that site not simply rebuild and persist as they had before.

⁶⁹ Ibid. 137.

⁷⁰ Ibid.

⁷¹ Ibid. 139.

He also briefly mentions an interesting theory by Joseph Maran that is worth some consideration. The theory is in keeping with Cowgill's framing of the instigation of collapse, in which collapse is precipitated by a state's inability to at the very least balance its income with its expenditures.⁷² Whereas much of the considerations of this paper will focus on the modes by which income would have likely been harder and harder for the elites of Mycenaean society to come by, Maran's theory places focus on the increase of state expenditures, particularly in regards to those massive construction projects that come to be seen by 14th century BCE.⁷³ Whereas the cost of some public works, like the road system put in place by Mycenae, may have brought back some returns in increased efficiency, much of what was constructed by the palace states in this period does not fit this mold, but rather served defensive and propagandistic purposes. These projects could not have been expected to have produced any direct fiscal returns.

Finally, it is essential that Middleton's discussion of trade in the Mycenaean collapse be provided, as it is the opinion of this paper that trade was an important factor in the growth, maintenance, and finally collapse of the Mycenaean palatial polities. As has been discussed in this paper, the palace polities of Mycenaean Greece have a unique connection to the movement and exchange of elite prestige goods and exotica. Theories that see trade as an important factor of collapse, as this paper does, see the elites at the top of Mycenaean society as being partially dependent on the exchange of these goods to articulate their role as elites and legitimize their place in the socio-political hierarchy. Thus, the breakdown of such elite trade would have placed a particular stress on these elites, one that would have exacerbated any other pressures present at

⁷² George L. Cowgill, "Onward and Upward with Collapse," in *The Collapse of Ancient States and Civilizations*. 258-264.

⁷³ Joseph Maran, "The crisis years? Reflections on signs of instability in the last decades of the Mycenaean palaces," in *Scienze dell'antichita. Storia Archeologia Antropologia* 15. 241-262.

the time. He notes whereas the likes of Galaty and Parkinson view the breakdown of conditions within Eastern Mediterranean trade partners as the cause of this disruption, others such as Sue Sherratt instead place agency for this disruption on the shoulders of the Cypriot merchants who would have been directly facilitating much of the Aegean trade in the Late Bronze Age.⁷⁴ The latter theory sees the cause of disruption being that these traders simply began to trade elsewhere, and rather than trade Mycenaean pottery, they began to produce their own imitations.⁷⁵ The issue that Middleton poses to both of these theories is that such dependency is simply not proven. He particularly questions how some polities, such as Thebes, could have been dependent upon foreign exotica, when the artifacts that have been recovered from the site could have comprised a single trade cache.⁷⁶ Furthermore, even for a site like Mycenae that is home to immense quantities of foreign exotica, he argues, where is the proof of dependence? He concludes by saying theories containing trade disruption as a strong element must also question why the elite were not able to develop “suitable ways of manipulating social capital” (Middleton, 2017: 145). It should be noted that Nakassis shares Middleton’s skepticism at such theories, mentioning Sherratt’s theory in particular. His argument instead states that Sherratt’s theory relies on an “overly rigid distinction between palatial and independent exchange” (Nakassis, 2013: 79). Though this is a fair point, especially in regards to Pylos, was Nakassis’ principle focus, it only regards Sherratt’s supposition that smaller actors were beginning to shift control of trade routes away from the palace. It does not regard the disruptive of shifting trade routes, and perhaps more importantly, changing returns on trade endeavors. As Middleton sees it, it is the local elites

⁷⁴ Middleton. 143.

⁷⁵ E. S. Sherratt, “The Mediterranean economy: ‘Globalization’ at the End of the Second Millennium BCE,” in *Symbiosis, Symbolism, and the Power of the Past: Canaan, Ancient Israel, and Their Neighbors from the Late Bronze Age through Roman Palaestina*. 37-62.

⁷⁶ Middleton. 144.

opting out of the palace system that finally marks the collapse of these polities. He notes that it is important to understand why this occurs.⁷⁷

3.4 Subdivisions of State and Aftermath of Collapse

Previous sections have provided systemic and social reasons for why states and complex systems in general are inherently unstable. Tainter's framework places focus primarily on the natural role of diminishing marginal returns in systemic functions, whereas Johnson placed emphasis on the tendency for the decisions of elite actors to compromise the stability of their states, especially focusing on how pressures of tradition can lead a state to change its response to pressures slower than those pressures themselves change. There is a third clear reason for the inherent instability of states that can be missed when such societies or systems are treated as monoliths. In actuality, states are comprised of numerous actors, secondary elites, and social groups, each forming what Eisenstadt refers to as their own *social boundaries*, and each acting in their own interest.⁷⁸ What must be recognized is that the interests of these groups can, and often do clash with those of the primary elites, leading to the formation of coalitions of secondary elites to oppose the state's winning coalition.⁷⁹ Such coalitions are ever-present, if constantly shifting and realigning, in society, but can effect great change in periods of weakness for the leading elites. Thus it is important to consider for a moment the way in which states are formulated, how internal dissidence can persist, and how it can bring about collapse.

Furthermore, through better understanding the internal subdivisions of the state structure, one

⁷⁷ Ibid. 145.

⁷⁸ Eisenstadt. 236-243.

⁷⁹ Ibid.

can get a better understanding of what is actually collapsing and what remains after state collapse.

State Composition and Competing Elites

The core principle by which Eisenstadt's framework operates is that societies are not organized by natural principals but are instead shaped by the interactions of the social actors within the state, and the groups that they comprise. These interactions are always occurring, and thus the nature of the state is always changing. Furthermore, the state is not itself a single entity, but rather the conglomeration of the social boundaries of these interacting social actors.⁸⁰ Each of these groups naturally extend their boundaries in response to internal and external pressures.⁸¹ The character of these boundaries, he argues, is determined by the social actors that construct them.⁸² Whereas collapse discussions often focus on the failures of those groups that construct political social boundaries, it can often be important, he notes, to understand how these failures interact with the failure of economic, social, or cultural boundaries. Furthermore, the competing interests of these various groups creates a built in instability, since group boundaries are constantly being rewritten and coalitions formed and reformed. To overcome this instability, states, according to Eisenstadt, form mechanisms of control, the most important of which being those concerned with "processing information, settling disputes, and establishing public symbols and their ritualization" (Eisenstadt, 1988: 239).

⁸⁰ Ibid. 237-238.

⁸¹ Ibid. 238.

⁸² Ibid. Eisenstadt enumerates four particular groups of elite social actors.

Collapse, under Eisenstadt's framework occurs when the power of the ruling elite dwindles or that of other social actor's increases (or some convergence of the two). Borrowing from Kaufman, one might expect the relative ability of the center to falter if they are unable to monopolize "floating" resources from the periphery.⁸³ As Kaufman notes, these same secondary elites often seek to assert their own autonomy and lack of accountability to the center, which further stresses the center's ability to collect necessary resources.⁸⁴ In this case, the ruling coalition is overturned by another coalition of social actors, in which case the mechanisms of stability put in place by the ruling elites are replaced. This framework informs a number of critical understandings about collapse. First, it provides an explanation as to how a healthy state can collapse, since the factors of instability are not progressive but rather constantly latent in society, prompting periods of great change when prompted by circumstance. Second, it helps to provide explanation for how moments of great change that are labeled as *collapse*, typically entail a shifting of authority away from a central elite to a local elite, who in turn articulate their own political ideologies and mechanisms of stability. Both these processes seem to apply to the collapse that occurred in Greece at the end of the Bronze Age and thus should be kept in mind when considering the external pressures that were at play in the period.

Concluding

Tainter's theory on *Complex Systems Collapse* and Johnson's on *Social Hubris* provide two cooperating explanations for the inherent instability of complex systems. Tainter provides us with a framework for the mechanistic processes of complex systems, and how they naturally face

⁸³ Kaufman. 224-229.

⁸⁴ Ibid. 227-229.

issues of *diminishing returns* and sticky costs. Though this paper disagrees with Tainter's supposition that this process was the primary reason behind the collapse of complex systems, it recognizes that they are always at play in society and often act in concordance with other factors to bring about collapse. Johnson's contribution on the other hand illuminates how the nature of the social actors in complex systems often work to add to the inborn instability of complex systems. To add to these considerations, Eisenstadt provides insight into a further instability inherent to states that stems from the very fact that societies are not monolithic systems, but rather they are comprised of various social actors and the boundaries they construct. These boundaries are always in flux, and the actors that construct them are often competing. This competition creates, as Eisenstadt asserts, an inborn potential for collapse. Middleton provides context and critique for these theories, and a framework to carry forward in examining the external pressures that would have been present at the conclusion of the Bronze Age.

These works on systems collapse illuminate the fact that even before external factors are considered, complex systems already face challenges to survival. While a system is adaptive, able to control and mobilize resources, and effective in balancing income with expenses, it can effectively weather even strong external pressures. However, when it fails to act as such, it is just as possible that no pressure at all is necessary to bring about the collapse of the system. It can collapse all on its own.

Chapter 4

External Pressures and Extrospective Explanations

In the previous chapter, this paper laid out the underlying instabilities that are inherent to complex systems. It made clear that it is possible for a societal collapse to occur completely devoid of outside impetus. Despite this fact, historical collapses tend to be brought about by a complex interaction of both internal and external factors. It is for this reason that the easiest explanation for a systemic collapse is rarely the most correct one. At the risk of oversimplifying myself, it seems useful now to provide an analogy to explain this concept.

Imagine a structure, such as a barn perhaps. If left unmaintained, such a structure can, and likely will, rot and eventually collapse on itself. The same outcome could be expected if the structure was hastily and poorly thrown together. That being said, a pristine and well-maintained structure can still be brought down, if it were say hit by a tornado. These cases are simple to explain. What if instead, though, the structure was not well built, nor was it well maintained, and one day when hit with a strong gust of wind it collapsed? Is the collapse due to the wind? Is the poor design to blame, or the inadequate maintenance? Truthfully they are all to blame. It is furthermore a pointless effort to determine which factor is *most* to blame. It was the concurrence of all three factors that brought down the structure. The best one can hope to do in order to understand the collapse is understand the factors at play and the process by which they interact to bring about collapse.

Having come to understand the internal weaknesses present in the Mycenaean system, it is now proper to turn to the pressures that it faced at the end of the Mediterranean Bronze Age. This chapter will focus on three external pressures for which a great amount of evidence exists, and which have been central to discussions of systemic collapse in the Aegean for some time now. Current evidence for each of these factors will be presented, and questions of how these pressures may have affected the Mycenaean palatial polities of the late Bronze Age, in conjunction with one another and the aforementioned internal instabilities of the existing system, will be discussed.

4.1 The 3.2 kya calBP Climate Event

Climate change is perhaps the most popular theory in current scholarship, not only for the collapse of the Mycenaean polities of the Late Bronze Age, but indeed for system collapse in general. The determining pressure of Mother Nature is cited as the primary cause for any number of historic and prehistoric collapses, from the Classical Mayan City-states to the Roman Empire.⁸⁵ The reason for this is apparent. Nature is powerful, and small shifts in a local climate can have significant effects on those living within. This is especially the case for early agriculturalist societies. Such polities rely directly on a predictable harvest to provide for grain stores to feed the stratified labor of the urban center. Without this predictable input of food into the system, it cannot properly continue to carry out all of its necessary functions. In these cases, systems are forced to downsize and people are faced with the decision of leave or starve. And therein is the other key factor of Climate Change explanations: they entail a domino effect. One

⁸⁵ See Jared Diamond's *Collapse: How Societies Fail or Succeed* (2005) for a popular example of scholarship focused on the determining effects of climatic change.

localized collapse prompts a movement of desperate and hungry people that can in turn affect the conditions of other systems. This interaction makes climate change theories for Mediterranean Bronze Age collapses particularly attractive due to the so-called *Sea Peoples* phenomenon that will be discussed at length later.

The problem with theories that rely entirely on shifting climate to explain systemic collapse is that climate is always shifting, but systems are not always collapsing. Tainter identified this issue back in 1988. Recall that in Tainter's framework, complex systems are created for the principle purpose of solving societal problems. Administration develops in ancient systems because food needs to be stored and redistributed to allow for the stable implementation of specialized labor. It is therefore one of the principle responsibilities of a complex system to maintain stability and provide constant access to food when external conditions unexpectedly change.⁸⁶ Indeed the existence of storage facilities at the Mycenaean palaces, as well as the construction of large-scale public works such as dams at Mycenae and a massive drainage system in the Boeotian plain, suggests that the palace centers sought to do just that.⁸⁷ One might also see an attempt in the final decades of their existence to provide stable access to food through importation of grain for sites in Macedonia.⁸⁸

Bearing all this in mind, it seems improper to place sole weight on the climate to explain the collapse of the Mycenaean palace states. It is, however, certainly a powerful pressure to consider, and could easily have had a devastating effect on any complex system, one that a less robust system may not have been able to weather. Fortunately, current research has provided new

⁸⁶ Tainter, 50.

⁸⁷ Malcom H. Wiener, "Causes of Complex Systems Collapse at the End of the Bronze Age" in "*Sea Peoples*" *Up-to-Date*. 46.

⁸⁸ *Ibid.*

scientific data to bulwark the existing textual evidence from the period in suggesting that the Eastern Mediterranean did indeed face a severe climate event in the centuries surrounding the many collapses in the region, of which the Mycenaean collapse was only one. The evidence for this event will now be provided and its likely impact on the Mycenaean collapse considered.

Textual Evidence for Drought

Theories for a wide-spread drought throughout the Eastern Mediterranean in the 13th and 12th centuries have abounded for quite some time, and have been supported since the beginning by a number of ancient letters and administrative records. Direct reference to drought is not made in any Linear B tablets. It should, however, be noted that the majority of current translated Linear B tablets come from a single site: Pylos, and evidence for drought at Pylos might be instead suggested by the wholesale abandonment of the site after its apparent destruction.⁸⁹ Instead evidence for drought in the Aegean is suggested by apparent existence of drought throughout the Eastern Mediterranean in this period. A number of Great Kingdoms in the Near East in this period make reference to suffering from lack of food. The most apparent and oft mentioned of these is the inscription by the Pharaoh Merneptah, in which he brags of having provided great shipments of grain to “keep alive the land of Hatti” (Dryce, 2005: 39). His brag is further substantiated by the discovery of a Hittite letter at Ugarit demanding a ship that could transport 450 tons of grain.⁹⁰ Egypt itself, the only Great Bronze Age Kingdom to crawl its way through the end of the Bronze Age, could not completely avoid the effects of drought. Records found from the reign of Ramesses III detail the existence of a strike in Al-Medina supposedly

⁸⁹ Wiener, 46.

⁹⁰ Wiener, 45.

due to a failure to provide the site with food, as well as the abandonment of military posts in Nubia, also because of a lack of incoming supplies.⁹¹ Another set of later Egyptian records notes a rise in the price of food products as compared to non-food products of 8-24 times its standard rate until 1110 BCE, when it dropped rapidly.⁹² Wiener notes as well the particular reliance of the Late Bronze Age kingdoms on ready access to grain, due to their particular reliance on chariot forces in warfare.⁹³ A number of records noting complaints of frail and starving horses in this period therefore further substantiates the existence of a struggle for the polities of the Eastern Mediterranean to access necessary quantities of food.⁹⁴ One must believe that the Aegean would not have been immune to the forces that were affecting the rest of the Eastern Mediterranean at this point. Further evidence to this idea is, however, provided by new-found data on climate conditions in the period.

Climate Data Supporting the Existence of a 3.2 kyr calBP Event

The first question that must of course be addressed is *what is the 3.2 kyr calBP event?* For those unversed in the terminology of carbon dating, the phrase “3.2 kyr calBP” means 3.2 *calibrated kilo-years before present*. The 3.2 kyr calBP event is then quite clearly the climate event that centered on the period 3.2 thousand years ago, 1200 BCE. Kaniewski and Van Campo discuss the plethora of data supporting such an event in the Eastern Mediterranean in their “Climate Context of the 3.2 kyr calBP Event” (in “*Sea Peoples*” *Up-to-Date*, 2017). As they note, the existence of a sharp climatic shift between 3.5 – 2.5 kyr calBP was first evidenced by

⁹¹ Wiener, 46.

⁹² Ibid.

⁹³ Wiener, 45.

⁹⁴ Ibid.

North Atlantic atmospheric and oceanic circulation patterns in the 90s. This data was then tied to global glacier expansion and resulting cooling and winter weather conditions.⁹⁵ These dates were narrowed by the later analysis of marine sediments, which indicated a number of ice-rafted debris events throughout the Holocene period. Among these, a particular double-peaked or Bond 2 event can be observed between the years 3.2 and 2.85 kyr calBP.⁹⁶ This suggests the existence of notable levels of high latitude cooling and climatic instability in this period, which Kaniewski and Van Campo note often coincide with low latitude aridity.⁹⁷ They note clear shifts in paleoclimatic data taken from marine and terrestrial sources across the Eastern Mediterranean that correspond to this Bond 2 event.⁹⁸

In regards to data from marine sources, Kaniewski and Van Campo consider data relevant to this paper from both the Ashdod coast of Israel as well as from the Aegean Sea itself. Data from the Ashdod coast comes in the form of $\delta^{18}\text{O}$ records of the planktonic foraminifera *G. ruber*, which were taken from two marine cores from the Southern Levantine Basin. These $\delta^{18}\text{O}$ records are used by climate scientists to observe changes in sea temperature and salinity. In this case, gradual increases in $\delta^{18}\text{O}$ levels around the 3.2 kyr calBP event reflect significant levels of aridification in the period.⁹⁹ Data for conditions in the Aegean are based off the ratio of warm versus cool planktonic foraminifera in the radiocarbon-dated core LC21, which was taken from the South East Aegean. These ratios, according to Kaniewski and Van Campo, suggest a cooling event between 3.5 – 3.0 kyr calBP that would have manifested itself in winter Sea Surface

⁹⁵ David Kaniewski and Elise Van Campo, “The Climate Context of the 3.2 kyr calBP Event” in “*Sea Peoples*” *Up-to-Date*. 86.

⁹⁶ *Ibid.*

⁹⁷ *Ibid.*

⁹⁸ *Ibid.*

⁹⁹ *Ibid.*

Temperatures of 2-4°C. This event, they theorize, would have likely been accompanied by a notable decrease in precipitation in the region.¹⁰⁰

Relevant data from terrestrial sources is taken from the Northern and Central Levant, Cyprus, and Anatolia. A number of samples from the Northern Levant have suggested a period of intense drying around 1200 BCE. One such source is a climatic proxy derived from the pollen record of the North Levantine alluvial plain, which shows general dry conditions from before 4.2 kyr calBP that spikes suggesting severe drought in the region between 3.2 – 2.85 kyr calBP.¹⁰¹ Similar findings can be seen in Western Syria, where stable isotope values taken from charred plant remains at Tell Breda-Ebla denote a deficit of overall water availability due to a reduction in rainfall in the region.¹⁰² A pollen-derived climatic proxy taken from Hala Sultan Tekke suggests drying in Eastern Cyprus as well. The harbor at this site, which Kaniewski and Van Campo note as the primary site for the entry and departure of elite and exotic goods throughout the Late Bronze Age, sees a transformation of its surrounding agricultural land into dryland.¹⁰³ In the Central Levant analyses of oxygen and carbon isotopic profiles from a U/Th-dated speleothem from Jeita Cave show the driest period to be between 3.2 – 2.9 kyr calBP, and nearby in the Southern Bekka Valley, agricultural activity ends between 3.25 – 3.15 kyr calBP.¹⁰⁴ In Anatolia, a hydrologic/isotopic balance model reflects a recession in the lake levels of Lake Van from 3.5 – 2.0 kyr calBP, and the $\delta^{18}\text{O}$ of another lake, the crater-lake Eski Acigöl reflects a likely rise in salinity and aridity in the region from 3.2 – 2.8 kyr calBP.¹⁰⁵

¹⁰⁰ Ibid.

¹⁰¹ Kaniewski and Van Campo, 88.

¹⁰² Ibid.

¹⁰³ Ibid.

¹⁰⁴ Ibid.

¹⁰⁵ Kaniewski and Van Campo, 90.

Despite the fact that no certain data has yet been derived from mainland Greece in this period, the context of all surrounding regions and the global Bond 2 event noted in the period suggest that the Mycenaean Greeks of the period would most likely have faced a period of significant cooling and drying, the very conditions that make agriculture difficult. Wiener notes an additional support for climate shifting in mainland Greece around 1200 BCE, that some of the sites that show the clearest signs of maintaining larger populations in the period are those very same areas in Greece that to this day see higher levels of rainfall than the rest of the region (Xeropolis, Lefkandi, etc.).¹⁰⁶

Climate Change and Mycenaean Polities

Considering now that the Mycenaean Greeks almost certainly faced both primary and secondary effects of large-scale cooling and drying in the centuries surrounding 1200 BCE, it is worth considering *how* these changes would have affected them. The most obvious and direct outcome of such an event would be that agricultural output would have slowed. This is especially troubling in mainland Greece where few regions could ever support more than one crop a year. Beyond that, however, the Mycenaean palace states would have been particularly vulnerable to poor harvest for the very reason that they were palace states. Palace states needed to keep a steady store of food to feed the specialized labor promoted at the palatial center. This labor was especially necessary for the feats of monumental building for which the Mycenaean were famous. Wiener for instance places the blame on such a drought for the fact that those aforementioned dams and drainage systems were destroyed and not repaired around this

¹⁰⁶ Wiener, 45.

period.¹⁰⁷ One can see how this inability to mobilize labor would have only exacerbated food shortages. Another notable effect of such a climate event would be migration. Migration would likely have taken place on a number of levels: within Greece, out of Greece, and into Greece. The relative stability of the palace at Athens as compared to the Peloponnesian palaces leads many to believe that many Peloponnesian Greeks migrated north to areas like Attica and Euboea that were less affected by the climatic shift. Others look at the depopulation of the Greek mainland and the increase of pots in the Levant during this period that resemble earlier Mycenaean styles to indicate that Greek speakers were moving out of Greece, to places such as the Levant.¹⁰⁸ Furthermore, the existence of new styles of weaponry in the Late Mycenaean Period that resemble those made on the Italian Peninsula may suggest migrations into Greece as well. If there is any credence to the effects of roving “Sea Peoples” on the Mycenaean collapse as well, as will be discussed in the following chapter, these movements may very well have also been prompted by such a climate event. It is this view that Kaniewski and Van Campo propose in conclusion to their own findings on this climate event.¹⁰⁹

It is then rather clear that the Mycenaean Greeks of the 13th and 12th centuries BCE would have faced a number of newfound challenges brought about by a period of stark cooling and drying. The effects of such an event truly cannot be understated, and the challenge to the Mycenaean polities would have certainly been daunting. It was not, however, the only factor facing the Mycenaean in this period. As discussed briefly above, climate change almost never

¹⁰⁷ Wiener, 46.

¹⁰⁸ For more information on this idea, see:

Fischer and Bürge, “*Sea Peoples*” *Up-to-Date*:

-Assaf Yasur-Landau, “Some Notes on Philistines, Migration and Mediterranean Connectivity.” 141-148.

-Aren M. Maeir and Louise A. Hitchcock, “The Appearance, Formation, and Transformation of Philistine Culture: New Perspectives and New Finds.” 149-162.

¹⁰⁹ Kaniewski and Van Campo, 90.

exists in a vacuum. It begets and exacerbates other pressuring factors, with which it acts in conjunction to effect systemic collapse.

4.2 Invasion, Insurrection, and “Sea Peoples”

If ever there was a villain in the collapse of the Eastern Mediterranean and Aegean kingdoms of the Late Bronze Age, it would be the so-called “Sea Peoples.” People have long theorized about these roving marauders, who would suddenly appear from the sea and lay waste to once prosperous cities. They have blamed for the collapses of kingdoms and cities from the Levant, to Anatolia, to the Mycenaean palace states of the Greek mainland. Yet, to this day very little is known about these mysterious peoples: whom they were, where they came from, or what impact they had in the Late Bronze Age collapses. This chapter will briefly discuss what is known about the “Sea Peoples” and what impact violence, originating from such an external group or from internal uprising, may have played in the collapse of the Mycenaean states. Before doing so, however, it is important understand the way in which states and the actors that comprise them interact with actors that exist outside the state system, or as they are often labeled, *barbarians*.

Bronson on Barbarians and State Collapse

As has been a central point of this paper, in any collapse of state there are both external and internal factors involved in the political process. This basic fact of collapse holds true when outside invasion is a contributing factor to collapse. Ancient sources all too commonly label invading barbarians as the primary cause of state collapse, be it accounts of invading Gutians

bringing an end to the kingdom created by Sargon in Mesopotamia, or that of invading Germans divvying up the territory of the Western Roman empire. Equally lacking to these explanations, however, are those that simply refuse to accept that seemingly robust or healthy states can be brought down by barbarians, and that in cases like that of the Western Roman Empire barbarian leaders simply take over after a drastic decline in the state. It is in response to such outlines that Bennet Bronson sought to outline the way in which out-of-state actors, or barbarians as he calls them, can be a legitimate causative factor of collapse. By following the framework he lays out, one can better understand the processes by which moving non-state actors might have had an effect on the Greek palatial polities of the Late Bronze Age.

To understand how barbarians from outside of state territories can affect states to the point of even instigating their decline or collapse, it is first critical to understand who these actors are. As noted, the key defining characteristic of Bronson's barbarians is that they are non-state actors operating outside of state systems.¹¹⁰ The tendency for these groups to attempt predation on states, he argues, is consequence of the fact that such groups generally see it as a more viable means of resource acquisition, and because states are easy targets of such raids due to their inherent nature of concentrating wealth in relatively few locations.¹¹¹ This sets up an inherent source of conflict between states and the barbarians that live on their peripheries. The question then is how, in any circumstance, a group of disorganized barbarians can overcome the ability of states to raise armies and mobilize organized means of violent coercion. In actuality, as Bronson indicates, in certain respects, barbarians command both defensive and offensive advantages over the forces of states. In respect to their defensive capabilities, geography often

¹¹⁰ Bennet Bronson, "The Role of Barbarians in the Fall of States," in *The Collapse of Ancient States and Civilizations*. 200.

¹¹¹ *Ibid.* 201.

plays a distinct role, with many historical barbarian groups sheltering themselves in mountains and other impassible terrains. They also draw advantage, however, from their very disunity, as the fact that power is *not* concentrated in any group or individual makes it difficult to find a weak point at which to strike. States do concentrate their power at the center of society, making the capital a vulnerable weak point to the state as a whole.¹¹² Offensively they also benefit from the fact that raising armies is relatively cheap, given the wealth that can be expected from a successful raid. Conversely, it is relatively expensive for states to raise armies, and the payoff for successful defense cannot be expected to compensate for the campaign's cost.¹¹³ These factors make clear that not only do barbarian forces historically have an incentive to attack states, but they have the means to do so successfully, and possibly inflict significant harm on the state. Bronson draws on the example of two analogous regions to provide evidence for the fact that the very success of a state can sometimes be contingent on the presence of a barbarian threat on its borders. The regions in question are those of the plain of Deli in Northern India and the fertile region of South East Asia, around modern Thailand, Laos, Cambodia, and Vietnam. The latter, as he describes, has seen the rise and fall of numerous states, including the kingdoms of Sukhothai, Angkor, and Champa.¹¹⁴ The former, on the other hand, for the whole period before British colonization was only briefly settled.¹¹⁵ The primary difference between these two locations, in regards to this outcome, he argues, is that the hilly peripheries of Northern India have historically been home to particularly fierce groups of barbarians that would pose a threat to

¹¹² Ibid. 203.

¹¹³ Ibid. 204.

¹¹⁴ Ibid. 212.

¹¹⁵ Ibid. 210-212.

any who settled in the relatively defensive plain below. Such a threat was simply not a factor in South East Asia.

Understanding then that barbarians can pose a serious threat to states, the next question to pose is in what ways does this threat manifest? To answer this question, Bronson categorizes the barbarian threat into four types:

- *Vultures*: scavengers that appear after a state has already effectively collapsed
- *Jackals*: those that “finish off” diminished states
- *Wolves*: those that wear down healthy states over time, and then kill
- *Tigers*: those capable of collapsing a fully healthy state¹¹⁶

In this framework, the vulture category would be exemplified by the role of the Scandinavians to the Roman Empire, whereas the tiger category can be seen in the conquests of the Mongol horde of Genghis Khan.¹¹⁷ The two intermediary categories are more difficult to pinpoint, as it can be difficult to trace decline in defensive capabilities in a state. Bronson suggests that the differentiation between the two groups likely depends on whether a state is constantly investing defensive resources to defend against another state or not. Where this is the case, jackals are more likely, whereas predation by wolves is most likely in those few states whose primary defensive threat are barbarians. Recognizing then that there are various ways in which barbarian groups can overcome states, the final question addressed by Bronson is, why does the control of a barbarian core associated with collapse or fall? His answer is rather concise: it is primarily because barbarians are, by definition, out of state actors, and thus do not have a functional understanding of how the invaded state’s administration was run. This makes states in this situation inherently prone to difficulty.¹¹⁸

¹¹⁶ Ibid. 213.

¹¹⁷ Ibid.

¹¹⁸ Ibid. 218

Discussing the “Sea Peoples” Phenomenon

The discussion on the existence and effects of a force of migratory “Sea Peoples” at the end of the Bronze age primarily originates from a number of textual sources dated to the period. The most notable of these sources is an Egyptian inscription by pharaoh Ramesses III at his mortuary temple Medinet Habu, dated to 1177 BCE.¹¹⁹ The inscription accompanies a scene of various groups in boats, marked as ethnically distinct by differences in dress and appearance, attacking unsuccessfully as an Egyptian host repels them, led by the Ramesses himself (as noted by his larger than life stature). The larger than life pharaoh points his bow steadfastly at the invaders as they crumble before him. A strong work of political propaganda. The inscription itself reads,

The foreign countries made a *šdt(t)* in their islands, migrating and scattering simultaneously through the war of the lands. Not one land could stand before their arms, from Khatte, Qode, Karkemish, Arzawa to Alashiya, cut off [...] A camp was [set up] at one spot within Amurru, devastating his people and his land as though they had never existed. They came on, with fire prepared in their van, straight against Egypt. Their main strength lay in the Peleset, the Tjeker, the Shekelesh, the Denyen, Weshesh – lands united!

(Redford, 2017: 36)

Many of the locations that Ramesses lists as having fallen to these invaders are known well, such as Carchemish, Alashiya (Cyprus), and Khatte (Hatti). The names of the invaders themselves, however, are less clear. Thus it is still unknown where exactly each of these groups came from, though not for lack of trying. From this source alone, it is apparent why so much is blamed on these invaders that Ramesses names. After all, the Hittite empire had fallen right before the inscription in question. This was not, however, the only source from the period that suggests the presence of invaders from the sea.

¹¹⁹ It is for this reason that the end of the Bronze Age in the Mediterranean is often marked by this date.

Another pharaoh had already by this point bragged publically in his own inscription about having overcome a confederate force of foreign invaders. In 1207 BCE, this pharaoh, Merneptah, claims to have defeated a force of “Eqwesh, Teresh, Lukka, Shardana, Shekelesh, Northerners coming from all lands...” (Cline, 2014: 7). Some of these names should be familiar. The Shekelesh is clearly the same group from the later inscription by Ramesses. The Lukka are a known group, almost certainly those from Southern Anatolia, in the region known in later antiquity as Lycia. This is of little surprise, as this region was often known in historical antiquity as a hub for piracy. Suggestions have been made about some of the other groups, including: Eqwesh refers to Mycenaean *Achaean*s, a term that would be later replaced by Danuna (suggested to be related to the Homeric term Danaans); Shardana refers to migrants from Sardinia (due to the similarity between the two names); and Teresh refers to either Etruscans or a related group (Teresh being suggested here to relate to the term Tyrrhennian, the Greek name for the Etruscans).¹²⁰ Regardless of the validity of these suggestions, it is clear that from the end of the 13th century into the 12th century BCE, the Egyptians were faced with a new threat that they understood to have arrived from the sea.

The Egyptians are not alone in recording invasion from the sea. Records have also been found in the destroyed city of Ugarit in the Levant. One letter found in this site, likely fired in order to be sent to the king of Cyprus for help, reads, “My father, now the ships of the enemy have come. They have been setting fire to my cities and have done harm to the land” (Cline, 2014: 109). Ugarit was destroyed, likely around 1190 BCE, and the letter seems to have never been sent. Other sites throughout the Central and Southern Levant were also destroyed around

¹²⁰ Cline, 8.

this period, though it is not known exactly by whom.¹²¹ Much attention has been given to a specific region of the Southern Levant, the so-called pentapolis of the biblical Philistines. This group, which came to prominence in the early iron age, are of particular interest to those studying the “Sea Peoples” phenomenon because they represent a distinct new culture in the region arising out of this period of turmoil. Some have related the pottery styles that appear around this time in the region to that of earlier Mycenaean wares.¹²² Could this suggest a movement of Greeks out of the Aegean to the Levant in this period? Might it give credence to the idea that some of the so-called “Sea Peoples” are in fact Mycenaean themselves? In short, it is difficult to provide a definitive answer for this question. For one thing, cultural elements are wholly capable of moving on their own without reflecting a simultaneous movement of peoples. Furthermore, even if this shift in culture *does* represent a movement of peoples, there is little reason to assume that those moving into the region in this period are the same that destroyed it previously, much less that they can be directly connected to the “Sea Peoples.”¹²³

So in the end, very little is known about who Ramesses’ and Merneptah’s invaders from the sea were. It is inconclusive how many people were moving around in this period, where they came from and where they went. What was however clear is that people were on the move at this time. How many of them were instigating acts of violence and how many were simply searching for a new home is hard to say. Yet, periods of large-scale population movements are complicated socio-political phenomena. They tend to entail periods of uncertainty and perceived insecurity, for the systems that people leave in droves, for the locations that they come to settle, and for the

¹²¹ Cline, 114 – 122.

¹²² See note 38.

¹²³ Cline notes in his chapter *End of an Era* that current scholarship prefers the idea that new settlers in this period of turmoil were more likely opportunists, settling in the available arable land, than violent invaders.

places they traverse on the way, regardless of whether the perceived threat is legitimate. This uncertainty of course has its repercussions, especially in systems reliant on steady long-distance economic activity. As any modern economist knows, uncertainty is bad for business. Whether and to what degree this might have played a role in the fall of the Mycenaean palaces will be discussed more later on. For now what is important to consider is simply this: the people moving at the end of the Late Bronze Age, be they violent or peaceful, “Sea Peoples” or refugees, would have had an impact on the larger world of the Eastern Mediterranean, and likely on Greece as well.

The Case for Invasions in Greece

So it is clear that by the end of the 13th century BCE, people were moving throughout the Eastern Mediterranean in greater numbers. It has been shown that some of these migrants may have originated from the Mycenaean palace states around this period. This would indeed make sense given the massive depopulation that was shown to have occurred in the following centuries. What evidence is there then for movements of people into the Greek world? Might invasion have played a role in the collapse of the Mycenaean polities in this period?

In this regard, information differs depending on the site. Though many of the prominent Mycenaean palaces were indeed destroyed around relatively the same time, and many of the destructions can be seen to have been accompanied by fire, only a few show signs that the destruction was likely intentional. The most notable of these sites is Pylos in Messenia. The destruction at Pylos was comprehensive, and suggested deliberate instigation.¹²⁴ Even the elite

¹²⁴ Helène Whittaker, “The Sea Peoples and the Collapse of Mycenaean Palatial Rule” in *“Sea Peoples” Up-to-Date*. 75.

burial mounds surrounding the palace were ransacked and destroyed. Subsequent to this destruction, the region of Messenia was thoroughly deserted. No attempt was made to resettle around Pylos, and no evidence exists for any attempt by an elite to reestablish control in the region. All this suggests active destruction of the center by some attacking group. But whether this group was “Sea Peoples” or even invaders at all is not certain. As Whittaker notes, it is just as likely that a desperate and disgruntled populace could have risen up against the elites at the palace center, taking the wealth that they had alienated and destroying the signs of their rule.¹²⁵ The only piece of evidence that seems to suggest the possibility of outside invaders is an oft-mentioned Linear B tablet from the site, which notes the appointment of 800 men to guard the coast of Messenia.¹²⁶ Many have interpreted this as a sign of anxiety towards a potential invasion from the sea, an attractive idea for those who believe in the destructive agency of “Sea Peoples” in this period. Though this is wholly possible, there are too many uncertainties involved to say for certain. For instance, due to the paucity of records on the subject, it is impossible to know whether such an appointment was standard routine in Pylos, or whether it was a desperate measure taken to defend against some new seaborne threat.

In this regard, however, Pylos may not be the only Mycenaean palace state to show signs of worry over military invasion. Indeed, a number of Mycenaean palaces undergo projects in the 13th century that seem to be preempting attack and siege. It is in this period that the massive walls that still surround the ancient site of Tiryns were constructed. It was also in this period that the second ring of walls around the palace at Mycenae was constructed, this time encircling Grave Circle A as well. Both Mycenae and Athens also dug deep cisterns at this period from

¹²⁵ Whittaker, 77.

¹²⁶ Ibid.

within their walls. This can only really be interpreted as an attempt to ensure access to fresh water from within the gates of the citadel. Could these projects be evidence of a mounting “Sea People” threat?

Once again there are a number of factors that confound this idea. First, as Whittaker notes, these Cyclopean construction projects, especially those carried out at Tiryns, would still have required immense amounts of time and physical labor. The fact that these projects are being undertaken in this period suggests that there was no immediate threat of attack. After all, they would serve no purpose if attacked while still being constructed.¹²⁷ Why else then would so many Mycenaean Palaces undergo these projects around the same time? There are other possibilities. It is not at all unlikely that the construction of monumental defensive features are more a projected message of strength than an actual necessary defensive implement. The necessity of such a message, however, would suggest mounting insecurity of the ruling elites, either from within or to surrounding polities.¹²⁸ They may also simply reflect a form of conspicuous consumption that focuses more on the world of the living than the afterlife (which seemed to be of pivotal focus to the Early Mycenaean elites, who were interred in the shaft graves). A problem for this idea is the construction of the massive Treasury of Atreus around this period. Also, neither theory particularly addresses the construction of hidden cisterns at Mycenae and Athens.

The other question that remains, however, is *if a number of the Mycenaean palaces were actually destroyed by foreign invaders, why were they not subsequently inhabited by these groups?* Indeed where habitation does resume after destruction in Greece, there is no immediate

¹²⁷ Whittaker, 78.

¹²⁸ This process has been suggested for the final centuries of other civilizations as well, such as that of the Classical Lowland Maya city-states.

shift in the material culture, and the language that comes to be written once more after the Greek dark age is largely the same as that which was written in the Linear B tablets.¹²⁹ Anyone involved in deliberately destroying any Mycenaean palaces was clearly interested primarily in the wealth concentrated by the Mycenaean elites at the palatial core, that is unless some personal vendetta was involved (a prospect for which no direct evidence can be supplied). This makes the “Sea Peoples” described by Ramesses II an even more unlikely candidate for invasion, since the Egyptian depictions of them clearly show boats with families and personal belongings in tow. If these are the same groups suspected of being agents of destruction in Greece, one must wonder why they do not settle in the lands they successfully invaded. Of course, an easy explanation for this is the same reason many are skeptical of invasion theory in the first place, namely why would a moving group choose to enter a state currently beset by its own turmoil?¹³⁰

Wiener notes further evidence of conflict in the years immediately preceding the Mycenaean palace collapses. This evidence primarily takes the form of new weapon forging techniques that arise in Greece, and in the form of metal hordes, buried in Mycenae before its destruction.¹³¹ Wiener sees the former as evidence of newcomers from the north in this period, in his view likely mercenaries, whereas the latter appears to simply be a sign of constant warfare in the final years of Mycenae. If his suggestion is correct, it may indicate a new situation for the palace states in the region. In the preceding centuries, it seems that it behooved the states in the Argolid at least to carry out their business in relative peace with one another.¹³² Something must have drastically changed if they were going to war with one another at this point. And if they

¹²⁹ Whittaker, 79.

¹³⁰ Middleton, 137

¹³¹ Wiener, 51.

¹³² Michael L. Galaty, “Mycenaean Globalism.” 143-171.

were not warring with one another, where was their target or threat? As of now this evidence seems to raise more questions than answers.

Violence as a Cause of Collapse

Regardless of how many of the Mycenaean palaces were destroyed directly by means of violent aggressors, and regardless of who these aggressors were, the primary issue with viewing invasion as the reason for the systemic collapse of the Mycenaean palaces is simply this: many sites have been destroyed at the hands of invaders or uprisings. Rarely, however, do these destructions prompt the complete collapse of an interstate system. Typically, even cities that are completely leveled are eventually rebuilt and resettled. For a single city to fail to do so is not unheard of, but for nearly all the Mycenaean states to face this issue around the same time cannot be a coincidence. Whittaker even notes in her case for “Sea Peoples” as a factor in the collapse of the Mycenaean states, “If those responsible for the destruction of the Mycenaean palaces were groups of “Sea Peoples,” the prevailing social and political situation within the Mycenaean kingdoms must have been a contributing factor to their inability to recover” (Whittaker, 2017: 78). Whereas violence has been shown to be a likely contributing factor to the fall of the Mycenaean system, and perhaps even the direct instigator of destruction in some Mycenaean polities, it cannot be the primary explanation for the collapse of the Mycenaean palatial system.

4.3 The Collapse of the Late Bronze Age Eastern Mediterranean

Full discussions can and have been had about the collapse of the international system of the Late Bronze Age Eastern Mediterranean. Like the collapse of the Mycenaean system, which constituted one of its many parts, the reasons for this larger collapse have also been up for debate. It is not the purpose of this chapter to take such an in depth approach to the Late Bronze Age collapse. Rather, the present discussion is necessary in so far as it is important to note that because the Mycenaean palatial states were plugged into a larger international system that was experiencing its own collapse at the time, they would have been affected by the collapse occurring around them. Thus the collapse of the larger system is, as far as this discussion will concern itself, another exogenous factor that must be considered when viewing the collapse of the palace polities of Mycenaean Greece. Indeed, some argue for the domino effect of such a larger system collapse as the primary causative factor in the Mycenaean collapse. This theory argues for viewing the Mycenaean palace states in their context as parts of the larger Eastern Mediterranean system. Following general theory of complex system collapse, it would argue that as other parts of the system were collapsing, additional stress was put on the Mycenaean states, to which they were eventually forced to succumb. Effectively the palatial system can be seen to sink with the Eastern Mediterranean ship.

Indeed, the other palace economies of the Late Bronze Age Eastern Mediterranean, as mentioned in previous chapters, were facing many of the same pressures that the Mycenaeans likely were. The severe drying and cooling that can be expected to have ravaged mainland Greece was certainly present in the Levant and Anatolia. Both these places as well, at sites like Ugarit, Troy and Hattusa, show signs of violent destruction by invaders, around the same time as

the destruction events on mainland Greece.¹³³ Indeed, by the time most the palaces face destruction in Greece, Hattusa has already fallen, and many Hittite cities are abandoned.¹³⁴ The primary significance of this occurrence for the Mycenaeans would have been the impact that these collapses would have had on their economies. The general theory would have it that since the Mycenaeans were indeed reliant on trade for their socio-political system to operate properly, if any trading partners were to suddenly fall, that would throw yet another wrench in the Mycenaean system.¹³⁵

While the core of this theory is certainly compelling, and the Mycenaean palace states do indeed seem to exhibit quite a reliance upon foreign imports, there are still quite a few issues with this theory that make it a poor mono-causal explanation for collapse. Firstly, as with any of the preceding explanations, a state can lose trade contacts and not collapse. Indeed, it happens all the time. Generally when one state falls, all those around it do not as well as was the case in the Eastern Mediterranean. Even in the extremely interdependent world of the Late Bronze Age Eastern Mediterranean, not every state crumbles. Egypt for example, though its power is greatly diminished in this period, continues on as a self-sufficient kingdom for centuries to come. This is evidence for the fact that robust and adaptive state systems can weather the collapse of the international systems of which they are a part. Still, the Mycenaean palace states *did* fall in the turmoil of the Late Bronze Age collapse. This speaks to the nature of the Mycenaean system, but also to the pressures of the system collapsing around it.

¹³³ Cline, 127-130.

¹³⁴ Cline, 126

¹³⁵ Monroe applies such an argument to the fall of palace economies in general during this period, as noted in Cline, 150.

Concluding

In the simplest terms, the end of the Bronze Age was an extremely tumultuous time for the states of the Aegean and Eastern Mediterranean. A global climate event manifested itself in the region in the form of cooling by average of 2°C and significant drying. This would have proved devastating for the crops of palace states throughout the Eastern Mediterranean and Aegean. At the same time people were on the move in this period: some perhaps seeking profit from the wealthy kingdoms of the East, many likely searching for a new home. In the context of these pressures cities and states began to collapse one by one. Each that fell spelt a further stress for the those that remained reliant on the system. By the end of the 12th century BCE, most had fallen. Of the great kingdoms, only Egypt remained, greatly diminished. As for the palaces of mainland Greece, most lay in ruins. Only a few settlements persist into the so-called “Greek Dark Age” and those that do abandon the palace economies that had brought them wealth in the Bronze Age. Pylos in Messenia is destroyed in the early 12th century never to be repopulated. Many of the states that faced destruction in this period, however, experienced a fate like Mycenae: destruction, an attempt at rebuilding, but a steady decline from which they would never return. The so-called “perfect storm” of the end of the Bronze Age would not only facilitate destruction, but would inhibit rebuilding.¹³⁶ In this way it facilitated a true collapse of the Mycenaean system.

¹³⁶ “Perfect Storm” being Cline’s preferred term for the conditions that he believes brought about the end of the Bronze Age.

Chapter 5

Conclusion

As mentioned time and time again in this paper, a collapse as complex as that of the Mycenaean palatial system is difficult to map out because it is inherently poly-causal. The palatial system under which the Bronze Age Mycenaean states operated was certainly rife with built in instabilities, both those which plague all complex systems and some that were a particular issue for the Mycenaeans. Since the wealth of the most well known Mycenaean palaces was almost certainly attained via the exploitation of their placement in the trade networks of the interdependent Eastern Mediterranean system, they developed a process of legitimization that required great amounts of wealth. For the Mycenaean palace state to run smoothly, the elite required a constant in-flow of wealth, wealth to show off in his great palace, wealth to trade with other elites as a sign of their shared elite culture, wealth to consume in great quantities at lavish feasts. Of course, such a system functions perfectly well in a climate like that of the height of the Late Bronze Age, in which great amounts of wealth traveled the sea and funneled into a few wealthy kingdoms, among which palace states like Mycenae and Pylos were counted.¹³⁷ This placed the palace states of Mycenaean Greece in a position of constant potential instability, however. Their system was one that required constant growth, constant input of new wealth to justify the center's position over the people of the periphery. At the same time, as Nakassis and

¹³⁷ One need only look to the goods aboard the Uluburun wreck to get an idea of the amount of material constantly flowing between Late Bronze Age polities at the system's height.

Eisenstadt note, there is a constant latent presence of a more traditional, localized elite who are ready to enforce their own autonomy when the ability of the center to maintain control begins to falter. Such a system, demanding constant growth, with competing internal interests always present, is from the beginning unsustainable in the long-run. Applying Tainter's theory of diminishing marginal returns only stacks an additional inherent pressure onto the pile, before any outside impetus is even discussed.

Around the 12th century BCE this system already beset by internal instability, however, was faced with a series of immense external pressures as well. Recent climate data makes it clear that access to food stuffs would have diminished greatly as the entire region was hit by centuries long period of cooling and drying. The Mycenaean kingdoms of this period would also have had to deal with the effects of people on the move. Labor was leaving the palace centers, migrants from abroad were moving through the region. All this movement and uncertainty would have had its own effect on the trade upon which the Mycenaean states relied. In a period of turmoil, like the mega-drought that these states would have been facing at the time, elites would have looked to find a way to input additional wealth into the system, both to bring additional food in during a time of shortage and to double down on legitimizing pressures in a period of uncertainty. Quite the opposite, however, return on trade (which would have likely been their primary source of wealth acquisition at the time) would have diminished greatly in the period, due to a number of concurrent and cooperating factors:

- Trading partners are collapsing or being diminished themselves, decreasing options for heightened return on trade.
- Collapsing sources of authority and greater numbers of independent moving groups of people decreases the perceived and actual safety of the seas.

A subsequent decrease in supply of willing merchants and heightened need for security forces would have driven up costs of sea-based trade, and thus lowered returns.

- The only clear apparent way to inject new wealth into the system at such a period would be to take it from outside. Any attempt to do so, however, only heightens the pressures of destruction, collapse, and uncertainty that were plaguing the system to begin with.

Each individual factor played off each to come before and after, confounding any attempt to conceptualize the Mycenaean collapse as a linear process. Ultimate external factors both beget and exacerbate proximate causes of destruction which play back on the ultimate, and each of these factors place stress on the weaknesses already present in the Mycenaean system. For this reason, despite the various palace polities meeting seemingly different immediate ends at different times, the end of the Bronze Age ultimately spelled the end of the palace system in Greece.

When viewed from one angle, Greece was beset by what Cline refers to as a “perfect storm” of coordinating factors in the 12th century BCE, which its palace states simply could not withstand. When viewed from another, the political-economic systems of palatial states like Pylos and Mycenae were so inherently fragile, being entirely reliant on the constant input of wealth from far abroad in order to persist, that it is no surprise at all that they eventually succumbed to collapse. In actuality, both of these views are fair assessments of the situation. The palatial systems of mainland Greece, like many states of the Late Bronze Age, were indeed inherently fragile. They were able, however, to ignore their systemic fragility, by, as Monroe puts it, *treating the symptoms* of impending collapse by basically throwing money at them,

money they acquired in troves by exploiting their position in the larger economic system of the Late Bronze Age Eastern Mediterranean.¹³⁸ By continually kicking the proverbial can down the road, however, they were only heightening the pressure of their own inherent weaknesses until no option remained for them when times got truly trying.

Some Mycenaean palaces did, as mentioned before, survive into the so-called “Greek Dark Age.” Yet, no palace economy came out on the other side. The Mycenaean Palatial System had truly collapsed. Why? Because it was a system designed to capitalize on the conditions of a specific period in history. It filled a very particular niche, but the methods it utilized to attain power and success were simply not of use in the coming Iron Age. The palace system had set up an extremely costly means of articulating, not only the legitimacy and necessity of the *wanax* and his palace, but also the very structure of the socio-political hierarchy, to the people. This made it all too reasonable for a waxing of an ability to utilize said means, due to a fluctuation in returns (and perhaps, if Maran is right, heightened expenditures), to prompt an opting out of that system by local elites. And indeed, as each palace falls, this is the pattern that is seen. As Nakassis noted, the role of the local *basileus* is emphasized as the palace, its chief figure, and those leaders which it had established (in Messenia at the very least) fall way.¹³⁹

It is perhaps never more important than now to understand the collapse of systems like that of the Mycenaean Greeks. Though it is improper to suggest that history ever completely repeats itself, and equally improper to suggest that an event that occurred over three thousand years ago could mirror perfectly a threat to the current global system, it is also improper to ignore the striking similarities between our current situation and that of the ancient Mycenaeans.

¹³⁸ Cline. 163.

¹³⁹ Nakassis. 5-19.

We find ourselves once more in a system that draws much of its profit from international trade in a globalized, interdependent system. We also find ourselves facing an impending climate event that will almost certainly place many of the same pressures on our system that the Mycenaean palatial system faced 3.2 thousand years prior. We have a couple key advantages over our ancient predecessors. Firstly, we live in an era of exponential technological innovation, innovation that can be applied to weather events to come. Our second advantage is that of foresight. Not only can we see what pressures are coming, but we can see how such factors have impacted systems in the past. It is important that we recognize whether our own system of growth will be sustainable in the long-run, and, if not, that we begin to find a way to adapt towards some system that is.

The Mycenaean collapse is an exemplary case for a confusing aspect of collapse, which is that it is both sudden and not so at the same time. That is to say that right up until the point when many of the palaces come to be abandoned or greatly diminished in power and popularity, they seem from the outside to be functioning just fine, even finding the time and the funds to construct rather large-scale works shortly before hand. In this regard, the point of collapse seems to come suddenly. Yet the manner in which this so-called collapse occurs is not sudden and calamitous. Rather, over the course of decades the power in these regions seems to shift away from the palace and the *wanax* to more localized elites, disenfranchised individuals and families that can no longer sustain themselves in the region move away, and any elements that were tied intrinsically to the palace, such as writing and monumental construction, simply fall away. What this shows, however, is that by the time it became clear that the system was not working, it was already too late to change it, and its abandonment was instead required. In light of this, it is clear that if we want to maintain our current system through the long-run, it must change, as Johnson

notes, preemptively. The Mycenaeans failed in this respect, and their system collapsed. Now is the time that will determine if the future will record the same of this system of ours.

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