MONASH University

Transformed Landscapes, Transformed Peoples:

Exploring the Environmental Impacts of Classical Greek Siege Warfare

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Abstract

This project aims to expand our current understanding of the impacts of Classical Greek siege warfare by demonstrating that much of the damage inflicted by besieging forces fell upon the extra-urban environment. Using a range of literary, documentary, and material evidence, alongside several different theoretical frameworks, including memory studies and landscape archaeology, this study aims to provide a holistic understanding of the environmental impacts that resulted from an ancient siege. A range of spaces, including agricultural landscapes, military fortifications, and productive environments located across the Greek *chorai* are analysed to determine the value they offered to a besieging force, and how they might have been targeted as a consequence. A series of case studies demonstrate the widespread consequences that could result from ravaging during siege warfare, both for the environment and for the human inhabitants of these areas. The thesis argues that the transformation of these landscapes resulted in long-term impacts to the food supply, and productivity of affected city-states in many instances.

In addition to demonstrating the tangible consequences of siege warfare, the study flags a number of intangible consequences that arose as a consequence of the physical landscape being transformed in war. The thesis argues that affected individuals modified their behaviours in response to their experiences of being besieged, which resulted in a defensive mentality taking hold of the population. This shift in behaviour and thinking led to further transformations of the landscape as individuals sought to prevent future invasions. The physically scarred landscapes and remnants of warfare scattered across the *chora* as a result of siege warfare are evaluated as potential sites of memory. The thesis highlights the connection between the physically scarred landscape and the way in which the siege is remembered, particularly through the context of trauma. By introducing and arguing for the applicability of traumascapes in an ancient world, the study seeks to re-examine the way that modern scholars conceive of trauma in an ancient context where diagnosing individual instances of trauma can be problematic. A number of case studies are examined to demonstrate how these traumascapes likely functioned in an ancient context, and what effects living amongst such a landscape would have upon the psyche of individuals.

Declaration

This thesis is an original work of my research and contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Benjamin Crawley

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Two Sides of the Same Shield: The *Chora* at Peace and at War

> And he forged a thriving vineyard loaded with clusters,
> bunches of lustrous grapes in gold, ripening deep purple
> and climbing vines shot up on silver vine-poles.
> And round it he cut a ditch in dark blue enamel
> and round the ditch he staked a fence in tin.
> And one lone footpath led toward the vineyard
> and down it the pickers ran
> whenever they went to strip the grapes at vintage -
> girls and boys, their hearts leaping in innocence,
> bearing away the sweet ripe fruit in wicker baskets.
> and there among them a young boy picked his lyre,
> so clear it could break the heart with longing
> and what he sang was a dirge for the dying year
>
> (Homer, *Iliad*, 18.654-666, trans. R. Fagles)

In the *Iliad*, Homer describes the newly forged Shield of Achilles, providing one of his most striking images—everyday life. The scene, explored in a lengthy *ekphrasis*, depicts the harvest (quoted above), alongside cattle-rearing, city life, and a range of other vignettes exploring activities that occupied the lives of Greek individuals.[1] While the tone of these verses is idealised, the activities themselves, and the poet's portrayal of them, almost certainly resonated with Greeks throughout the centuries, who themselves were probably at least familiar with, if not directly involved in, similar undertakings.[2] Agriculture is central to Homer's depiction of everyday life, and his descriptions of the planting and harvest of grains, the tending of vineyards, and herding of livestock, though brief, are highly evocative. It was not only labours that were described in this passage, but leisure too, and we read of harvest festivals, weddings, and a youth playing his lyre among the burgeoning vines.[3] In the centuries following Homer, agriculture remained at the heart of Greek society, acting more as a way of life than a profession, and grains, grapes, and olives continued to serve as staple crops, feeding the populace and creating wealth for their owners.[4] Throughout the Classical period (traditionally dated 480-323 BCE), which serves as the focus of this study, the countryside (or *chora*) served a vital role in supporting the

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[1] Hom. *Il*. XVIII. 572-580, 629-638, 674.
[2] Hanson 1998, 1.
[3] Hom. *Il*. XVIII. 572-577, 689-707.
[4] Hanson 1998, 1; Foxhall 1993, 134; McHugh 2017, 132.

functioning of the city-states.[5] The countryside produced more than food of course, and numerous industries were developed to make use of raw materials that could be gathered across the countryside, producing many of the goods necessary for everyday life.[6] It is hard to overstate the importance of this aspect of the countryside. Every Greek city, monument, and military campaign—things that feature so prominently in the histories of the period—was supported by the efforts of those working in the *chora*, even if those workers found scant mention in the histories of their time.

There was, however, a second side to Homer's shield of Achilles, depicting the darker side of Greek life.

> But circling the other city camped a divided army
> gleaming in battle gear, and two plans split their ranks:
> to plunder the city or share the riches with its people,
> hoards the handsome citadel stored within its depths.
> But the people were not surrendering, not at all.
> They armed for a raid, hoping to break the siege -
> Loving wives and innocent children standing guard
> on the ramparts, flanked by elders bent with age
> as men marched out to war.
> (Homer, *The Iliad*, 18.593-601, trans. R. Fagles)

On this side of the shield, we find depicted bloodshed through disputes, animal attacks, and most prominently, warfare.[7] This side of the shield serves to remind us that the peaceful routine and order of everyday life could be quickly overturned by forces beyond one's control. Homer's choice of the siege as the principal vignette on this half of the shield is notable, highlighting the feared position it held in the minds of Greek individuals. Unlike the traditional method of Greek warfare, the pitched battle, sieges affected a much greater percentage of the population, as even non-combatants suddenly found that their homes, freedom, and very lives were at risk.[8] In the passage above, Homer highlights the plight of non-combatants in such situations, who, unable to fight for themselves, had to watch from atop the city walls as soldiers fought to determine their fate. We find similar scenes reported by the historian Diodorus Siculus during the Siege of Syracuse in 414-413 and the Siege of Athens in 404.[9] Such allusions may not be entirely coincidental, as Homer's works remained cultural icons throughout Greek history and were emulated by many ancient authors. These similarities do, however, hint at the idea that siege warfare saw little change between the recording of the *Iliad* and the close of the Peloponnesian

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[5] Henceforth all dates referenced within this study will be BCE unless otherwise noted.
[6] Bintliff 2012, 281; Foxhall 1993, 5; Thommen 2009, 39, 62.
[7] Hom. *Il*. XVIII. 580-585, 592-628, 677-685.
[8] Hall 2018, 186.
[9] Diod. Sic. 13.14.47, 13.72.8-9.

War (431-404), particularly for the masses of non-combatants who got caught up in such conflicts. During invasions, rural populations were often forced to abandon their fields, farms, and possessions to take refuge in areas away from the fighting, thereby placing much of the countryside into a state of dormancy, and at the mercy of the invasive force.[10] While the sieges of the Classical period did not typically last the ten years it took to wear down Troy in the *Iliad,* they were often still lengthy affairs, and the countryside might be occupied by besiegers for months or years at a time.[11] Over the course of a siege, the productive countryside, so vital to the city-states, was subjected to widespread ravaging, and in the aftermath of the siege, those who returned would have found a landscape transformed by war.

In this thesis I argue for an expansion of our understanding of the consequences of ancient siege warfare, both in terms of physical space, but also in terms of temporal extent. Employing a multidisciplinary approach, and moving beyond the site of the siege itself, I explore the ways in which the surrounding landscape could be modified as a result of siege warfare and examine the consequences that this transformation presented to those seeking to reinhabit the space following the conflict. This aspect of the siege has heretofore received limited scholarly attention, though I suggest the implications that resulted from the devastation of the *chorai* during sieges could be far-reaching and important for understanding many of the developments that followed these sieges. While an invading force could quickly plunge an orderly and productive countryside into the chaos of war, this study demonstrates that the restoration of order and productivity was far more difficult. Having argued for the expansion of the scope of our studies to include the breadth of the *chora*, I also suggest that the temporal scope of our examination needs to be expanded. Too frequently, accounts of sieges—particularly those written by ancient authors—shift their discussion elsewhere as soon as the fighting ceases and the soldiers depart. The reader is left wondering just how the affected individuals were able to manage the devastation wrought by this highly disruptive form of warfare. In this thesis I set about examining these questions, evaluating the wider consequences of siege warfare for individuals in the aftermath of a conflict, both in terms of their access to basic resources, as well as longer-term impacts to productivity in these regions. The consequences that followed siege warfare did not only have tangible impacts, however, and I suggest that scholars must also consider the ongoing psychological impacts for those individuals caught up in siege warfare. This study thus examines how the experience of being besieged could result in behavioural shifts among affected individuals, which could lead to further transformation of the landscape. The thesis also examines how the physical scarring of the landscape could be connected to the interlinked concepts of memory and trauma, which affected the perception of siege warfare in post-siege periods. I contend that living amongst, or frequently encountering, physical

[10] See Thuc. 2.13-14. See also Aen. Tact. 6-8, 10 for the former commander's advice in this area.
[11] The Spartan siege of Mount Ithome may serve as the sole exception here, as Thucydides (1.101-3) suggests the siege lasted for ten years. The practical workings of this siege are not well understood however, and many scholars doubt the authenticity of this account (see note 5 in Chapter Three). The sieges of Potidaea and Plataea during the early years of the Peloponnesian War are each understood to have lasted for over two years.

remnants of a siege continued to trigger memories of that event within the minds of those inhabiting the space. I further introduce the concept of the traumascape to the ancient world to demonstrate how living in these modified landscapes could influence the mentalities of affected peoples, potentially modifying their understanding of the event, their outlook, and their future decision making. Much like Homer's Shield of Achilles, this thesis examines both the peacetime and wartime activities of the *chora* as a means of better understanding the diversity of experiences through which these very real Greek individuals once lived.

Defining Landscape and the *Chorai* of Classical Greece

A "Landscape" is a nebulous concept and proves hard to define. Perhaps the simplest definition is that landscapes are the physical spaces around us, or "the world out there", as experienced through human eyes or consciousness.[12] Landscapes are a subjective means of understanding space, a type of mental overlay that connects independent places into a structured space which can be named and navigated.[13] Landscapes are never static, but constantly in flux, as individuals and communities seek to contest or redefine the space.[14] In this way the Greek world was divided into more than 700 different political units, each overseeing their own landscape. These were the city-states, and each was constituted by both an urban area, or *asty* (ἄστυ), and the lands beyond the urban limits, which was termed the *chora* (χώρα). There were great differences in the size, geography, resources, and political organisation among the city-states, so it is important to keep in mind that there was no one standard *chora* for the Greek world. Across these c*horai* could be found a diversity of environmental features, ranging from forests, plains, mountains, and rivers, to agricultural estates, fortresses, and mines. The varied environments were likewise inhabited by numerous species of fauna and flora, ranging from wild boars and untamed forests of fir trees, to domesticated cattle and orchards of olive trees. Humans too inhabited this environment, though they, more than any other element, were unrivalled in their ability to shape the appearance and functionality of this space.

Estimates vary, though perhaps somewhere between a third to a half of the Greek population dwelled outside of urban areas.[15] Because of the centrality of agriculture to the Greek economy, even those dwelling within urban environments would still have frequently ventured into the *chora* as part of their work.[16] Participation in religious rituals, such as sporting events or festivals, would have coaxed many urbanites out of the cities and towns for a time, and the events aided in creating a shared sense of community within the city-states.[17] The *chora* thus played a central role in the life of the city-state and

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[12] Bender 2006, 303.
[13] Tilley 1994, 15; Bender 2006, 306.
[14] Makins & Reitz-Joosse 2021, 2.
[15] Hansen 2006, 24, 28-29; Bintliff 2012, 270-1. As Akrigg (2019, 94-5) notes, however, even our best estimates are limited by the literary and material record, where some segments of the population, such as enslaved individuals, are far less visible.
[16] Thibodeau 2016, 627. Note that many Greeks were engaged in multiple economic activities simultaneously.
[17] Shear 2021, 5, 24-25.

its inhabitants. Yet despite its significance, determining the actual workings of the *chora* can be difficult. This was highlighted by Robin Osborne in the 1980s, who noted the relatively sparse nature of references to extra-urban activities in the art and literature of the period.[18] Osborne attributes such lack of detail to the familiarity of these activities to a large section of the populace, such that specifics did not bear recording.[19] This sentiment is shared by Xenophon's Isomachus, who suggests that agriculture is " the easiest [art] to learn" and could be understood by simply "watching men at work" and through common sense.[20] Fortunately, there has been a great deal of scholarly interest in the practical workings of the *chora* in recent times, and developments in archaeology, quantitative modelling, and other methods of analysis have allowed scholars to fill-in many of the gaps left by the authors of the period. As such, our understanding of Greek agricultural practices,[21] forestry,[22] livestock farming,[23] and mining,[24] to name but a few examples, has seen much improvement in a relatively short span, creating a more complete view of the lives of those who worked in these environments.

Artificial construction facilitated both the occupation and exploitation of the *chora*, whether in the form of farmsteads built to support domestic and agricultural activities, a temple to serve a community's religious needs, or a fortress to protect its borders. Human involvement in the *chora* did not stop at construction however, and natural lands were artificially cleared, furrowed, and terraced to facilitate agriculture. Rivers and waterways were similarly modified to improve moveability within the space, and had their waters drawn upon to create irrigation channels.[25] Local communities could band together to carefully control the extent of a forest's boundaries, either out of concerns of ongoing sustainability, or because the space had been designated a sacred grove.[26] Because human influence was so ubiquitous across much of the *chora*, I suggest we envision these landscapes as built, or at the very least managed, environments.[27] While I have emphasised the human element here, it was ultimately a combination of both natural and human activities that shaped the appearance and functionality of the Greek *chorai*. While nature was able to shape the landscape in ways beyond the capability and understanding of the ancient Greeks, these natural processes operate on a very different timescale to that of humans. Comparatively, the human inhabitants of an area were able to drastically modify their environment in a much shorter period.

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[18] Osborne 1987, 16.
[19] Osborne 1987, 16.
[20] Xen. *Oec.* 15.4-13, 18.10.
[21] Hanson 1998; Foxhall, 2007; Mchugh 2017, 2019.
[22] Meiggs 1982; Hughes 2005, 2011.
[23] Halstead 2014; Chandezon 2015.
[24] Camp, 2001, 139-141; Thommen 2009, 62-3.
[25] Thommen 2009, 57.
[26] Foxhall 2020, 1-2; Grove and Rackham 2001, 184–187.
[27] Thinking of these spaces as built environments is not a new concept. See Tilley 1994, 73; McGlade 1999, 462; Layton and Ucko 1999, 10; Smith 1987, 11.

Scholars including Leese and Bresson have convincingly argued that Greek individuals generally acted in an economically rational manner and engaged in profit-seeking behaviour in order to maximise their resources.[28] The *chora* offered a host of productive opportunities for profit-seekers, as the landscape could innately yield, or could be modified to yield, a wealth of resources. The staples of everyday life, food, drinking water, charcoal, and firewood (used for heat as well as cooking) were grown or collected in the countryside, and transported both centripetally into urban areas, as well as laterally to other areas of the *chora*. Raw materials, including timber, stone, and marble were similarly gathered from the *chora* and transported across the Greek world. Numerous industries operated within the *chora* and supplied the region with processed goods ranging from olive oil and wine to ceramics, charcoal, and clothing. Thus, much of the modification of the landscape was undertaken with the goal of improving efficiency and profitability. Like all humans, the Classical Greeks were not perfectly rational beings, of course, and their decision making could be affected by a range of external influences. The disruptive impacts of siege warfare appear to have been a particularly pertinent example of an external event disrupting profit-maximising behaviours. In post-siege periods we instead find affected individuals prioritising security and self-sufficiency over profit maximisation. This highlight that profitability was not the only driver of human behaviour, though it is perhaps the easiest motivator to identify at such a temporal distance.[29] Ultimately, I argue that there was a logical system underlying the actions of Greek individuals, even if at times these actions may appear irrational from a modern viewpoint.

In reality, the *chora* was not the idyllic haven encountered in contemporary literature, as in the Shield of Achilles passage quoted above. Few individuals could ignore the proper times for planting or harvesting, lest they go hungry that year, and thus the agricultural calendar served as the principal driver for much of the city-state's activities.[30] There was little time to rest even between planting and harvesting periods, as there were countless other tasks to perform in order to boost the chances of the harvest's success.[31] Beyond crop farming, there were a range of additional productive efforts, such as beekeeping, pottery-making, or livestock rearing, carried out by individuals to diversify their interests, likely to both raise their income and offset the threat of a bad harvest.[32] The studies of Grmek and McHugh have highlighted the strain agricultural work placed upon the body, which can be detected

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[28] Leese 2021, 1-5; Bresson 2015, 22-27. As Foxhall (2007, 22) notes, however, modern economic terminology does not always correlate perfectly with ancient economical practices, hence she prefers to view economic ideas including capital, risk, and credit as analogous across the modern and ancient worlds, rather than synonymous.

[29] While modern economists might instead elect to measure utility, rather than wealth, such an approach is potentially fraught with difficulties when dealing with a culture we do not fully understand. Attempting to evaluate or overlay such a value system onto a culture so far removed from our own comes with a substantial risk of misrepresenting or misunderstanding the Greeks of the period, so I have elected to focus on profitability, keeping those caveats front of mind.

[30] See Osborne (1987, 15) and McHugh (2019, 215) for examples. Such calendars are based heavily on the work of Hesiod's *Works and Days.*

[31] Hes. *Op*. 382-616: McHugh 2019, 214.

[32] Foxhall 1993, 5, 10, 13.

from skeletal remains.[33] The greatest burdens undoubtedly fell upon enslaved individuals, though much of the working population was probably subject to quite gruelling labour at times, whether working in the fields, on the threshing floors, or in the mines. The reality for many individuals is that life was lived close to the edge of subsistence: rents had to be paid, meals provided, and so on, with little to no safety net. Disruptive events that forced an interruption to the normal routines of country life, whether in the form of severe weather, natural disaster, or human conflict, were unwelcome at best and catastrophic at worst. The onset of a siege presented a terrifying threat to all, serving as one of the only periods in which we see mass death through starvation for example.[34] For those who made their homes in the countryside, a siege could have additional ramifications, threatening undefended homes and fields and placing livelihoods, possessions, freedom, and even the lives of the besieged at the mercy of an invading army.

Siege Warfare in Context

Siege warfare was not the prototypical method of warfare for many Greek armies, though it was by far the most impactful in an environmental sense.[35] The pitched battle, in which two armies squared up against one another, was generally understood to have been the proper way of fighting.[36] Despite the seemingly widespread view among the ancient Greeks that refusing pitched battle to retreat behind fortifications was cowardly, many Greek armies elected to trust in the strength of their walls when they believed themselves outmatched on the battlefield.[37] At such times, the inhabitants of the invaded city-state usually fled their homes, removing themselves, and if time allowed, their tools, livestock, and even the "woodwork from their houses" out of reach of enemy raiders.[38] While something akin to a military revolution did occur in the Greek world over the course of the fourth Century BCE, until this point the Greeks' capacity for siege warfare was extremely limited, particularly when compared to regional powers such as the Persians and Carthaginians.[39] Throughout the Peloponnesian War, the city-states lacked access to the siege weaponry and disciplined troops needed to capture a stronghold by storm, hence taking shelter behind a sturdy wall offered a good chance of survival. There were consequence that accompanied this refusal to battle, however, as an unchallenged invasion force found themselves with free rein over an undefended and vulnerable countryside. In many cases, the invaders, unwilling to attempt a direct assault upon the stronghold, contented themselves by ravaging homes and farms before moving elsewhere. If the invading force were truly determined, however, they could instead lay siege to the stronghold, which typically involved the construction of encircling walls and the

[33] Grmek 1989, 77-9; McHugh 2019, 214-217.
[34] Garnsey 1988, 35-9.
[35] Krentz (2007, 168-9) demonstrates that sieges were referenced more frequently than pitched battles during the Peloponnesian War, however, signalling that fewer city-states were willing to risk their chances on the battlefield.
[36] Campbell 2006, 30; Ober 1985, 32-33, 45; Van Wees 2007, 281, 288-90.
[37] See Plut. *Mor. Ages.* 29, 55; Plut. *Mor. Agis.* 6; Hdt. 7.9 on some negative Greek attitudes towards the use of walls as a military strategy.
[38] Thuc. 2.14; Ar. *Plut.* 560-575.
[39] Campbell 2006, 30; Strauss 2007, 237; Marsden 1969, 65-67.

enforcement of a blockade. Starvation typically presented the greatest threat to the besieged in such situations, though if the stronghold were particularly well equipped, or a full blockade could not be enacted, a siege could drag on for months or even years. At such times, the besieging force rarely remained idle, and in many cases attempted to break the stalemate by undertaking large-scale engineering projects, enacting clever ploys or stratagems, or by undermining the morale of the besieged. This last element serves as the focus of this work, as I explore the consequences that arose from situations where a besieging force laid waste to the surrounding countryside. For the economically rational Greeks, there was a troubling cost-benefit analysis underlying their response to invasion. An invaded people had to weigh up the danger of losing one's life were they to engage in pitched battle, versus the potential for widespread loss of wealth and future productivity to ravaging were they to refuse this challenge and find themselves placed under siege.[40]

The sieges examined in this work have fascinated scholars across the ages and have thus been approached from a variety of angles. While there are a few lingering areas of contention between scholars (such as when evaluating the effectiveness of siege weaponry), scholars generally agree on the basic principles, methods, and objectives of siege warfare.[41] The ancient historians had a quite narrow range of interests when it came to sieges, and we thus find a great deal of attention paid to military commanders, siege technologies, and interesting stratagems, while the common soldier or non-combatant's experience of a siege received little attention. Once this problem became recognised (thanks to works such as John Keegan's *The Face of Battle),* scholars have begun to pay more attention to these less explored areas of ancient siege warfare.[42] Garland, Chaniotis, and Hall have each attempted to understand the experience of war from the view of non-combatants during sieges.[43] These studies emphasise the extreme disruption of normal life that accompanied siege warfare, in which individuals might be forced to flee their homes, watch loved ones fall in battle, or seek asylum at a sanctuary during a sack. I argue that traumatic events such as these, when experienced simultaneously by much of the population, could have had long-lasting consequences in the public consciousness or collective memory. Much like these studies, this thesis does not set out to reimagine the practice of ancient siege warfare, but rather to expand our understanding and scope of its consequences. Thus, while I acknowledge that sieges were principally directed against urban targets, I argue that we need not likewise limit our understanding of the impacts of siege warfare to this urban environment. Hence, in this study attention

[40] Bresson 2015, 416; Ober 1985, 3, 42-44.
[41] For an overview of these principles and technologies see Campbell 2006 or Nossov 2012. On the debate over the effectiveness of siege weaponry compare Levithan's (2013, 3-4) approach to Campbell (2006, 62-3) for example. For a better understanding of particular sieges see the overviews of individual sieges by Donald Kagan (1981, 2005) for the sieges of the Peloponnesian War and Stephen English (2009) for the sieges of Alexander). These works are invaluable resources, as they consolidate the ancient references, which were frequently divided across several works, while providing a wealth of additional contextual or background information to aid understanding.
[42] Keegan 1976.
[43] Hall 2018; Garland 2017; Chaniotis 2003, 2005.

is frequently diverted away from the military progression of the siege at the stronghold itself, with the extra-urban landscape and its inhabitants taking center stage instead. This is not an entirely new concept, though this thesis greatly expands on ideas raised in brief by Hanson and Foxhall, among others.[44]

Ravaging the *Chora*

Images of pock-marked landscapes cratered by artillery strikes, networks of trenches, and cities, towns, and monuments left in ruin leave no doubts about the destructive capability of modern warfare.[45] While the ancient Greeks lacked the technologies of industrial warfare, they had their own methods of destruction, and the landscapes of the ancient world were likewise modified by warfare. One of the most common phrases used by ancient authors in connection with invasions and siege warfare was that the land was "ravaged" (πορθέω, ἁρπάζω) or "laid waste" (δηΐόω) as armies or bands of raiders moved through the landscape.[46] There were a range of destructive activities that fell under this broad banner of "ravaging", including the burning of fields, the felling of olive trees and vines, the razing of farmhouses and other infrastructure, the looting of stored crops, household goods, and livestock, alongside many other activities that will be examined throughout this study.

While the devastation of the landscape was not exclusive to siege warfare, the extended length of this type of warfare meant that ravaging could continue over a much longer period, and across a much more extensive area. Once a stronghold had been encircled and a blockade enacted, fewer troops were required to maintain a siege, while others could be spared to carry out foraging or destructive efforts across the region.[47] This offered several benefits to a besieging force, which explains the frequency with which the tactic was employed. The first benefit was that gathering supplies from the surrounding countryside allowed an army to support its siege efforts from the produce of their enemies, while denying these resources to the besieged. Food, water, and fuel were likely the most important targets, though foragers also gathered construction materials needed for the siege effort. The second benefit of ravaging was the economic and psychological damage it could cause the besieged populace. Those trapped within a besieged city were often forced to passively endure their properties and lands being looted and destroyed. The fear that their wealth was being stolen and their livelihoods affected could dampen morale, and potentially even breed dissent within the besieged stronghold.[48] A third benefit of sending troops out on raiding forays was that it gave irritated troops an outlet for their frustration. One of the core issues that military commanders faced during long stretches of warfare was managing

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[44] Foxhall 1993, 143; Hanson 1998, xiii, 166-168, 247.

[45] See Webster 1996 for an overview of the environmental impacts caused by modern warfare, and its long-term impacts on regional communities in the aftermath of the fighting.

[46] Hanson 1998, 10-14. Hanson equates the ancient use of the general "ravaging" with the modern term "bombed." While both are fairly nondescript and lacking specificity, the informed contemporary reader would instantly understand the type of actions that fell under this banner.

[47] Thuc. 7.104; Xen. *Hell.* 6.5.27-30; Aen. Tact. 16.2-4. During the siege of Potidaea, Thuc. 1.64-5 suggests that the additional troops needed to complete the Athenian encirclement were sent off campaigning in the region once the siegeworks had been constructed.

[48] See Thuc. 2.16, 2.21 for a notable example.

boredom and discontent among troops whose presence was required to maintain a siege that involved little day-to-day action.[49] By venting their frustration through destruction and the opportunity to seize personal booty, the morale of the besiegers likely improved, and personal enrichment seems to have served as an incentive for soldiers to willingly participate in such lengthy invasions.

The raiding bands who performed this ravaging thus operated as an extension of a besieging force, and their actions were encompassed within the wider siege strategy. This explains the strategic nature of the ravaging, which was significantly more controlled and methodical than what we find during the chaotic sacking of cities following a successful siege.[50] In many cases, invading armies arrived well prepared for ravaging, having specifically designated and outfitted troops with specialised equipment for this purpose.[51] While on rare occasion, natural forces, such as fire or water, could be harnessed by besiegers to wreak devastation, far more often it was left to human or animal power to tear down buildings, fell trees, or trample fields. Ravaging was therefore intensive work, costly in both effort and time, so efficiency was key. Not all areas of the landscape were equal in the minds of raiders, and targets of high importance, whether because of the resources on offer, or because of the value placed upon them by the besieged, seem to have been prioritised. That this level of organisation was undertaken highlights the importance of ravaging to military strategy of the period and helps to explain how even relatively small armies might leave a huge swathe of the landscape in ruins over the course of a siege.

Many previous attempts have been made to evaluate the impacts of this widespread ravaging upon city-states, with the majority of this attention directed towards agriculture and the food supply. Like most examinations in this area, this study is indebted to Hanson's *Warfare and Agriculture in Classical Greece* for its contribution to our understanding of ancient ravaging. This study, published in 1983, and updated in 1998, still serves as the most influential work in the space. Hanson's experimental approach changed the state of thinking in the area, particularly when it came to establishing the limitations of ancient armies.[52] While I generally agree with Hanson's conclusions, I think it valuable to revisit his ideas in light of the vast quantity of research that has been produced since. To that end I will be drawing upon the work of numerous important scholars, who have taken Hanson's ideas and challenged them, expanded upon them, and approached them from new angles.[53] The principal focus on siege warfare separates this thesis from these existing studies, and through this study I hope to add another dimension to our understanding of the wider environmental impacts of ancient warfare. Where many view the restoration of agricultural activities as a sign that the disruptive consequence of warfare had been resolved, I propose that this was likely only one stage of a lengthy road to recovery. Few have directed

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[49] See Curt. 5.1.36-39; Diod. Sic. 17.94.1.

[50] See Diod. Sic. 13.62.1-5, 14.53; Plut. *Vit. Alex.* 11-12; Plut. *Vit. Dion.* 41 for some examples of these frenzied sacks.

[51] Hanson 1998, 19-22.

[52] Hanson 1998, 59-60, 67, 182.

[53] There are too many to list, though the works of Foxhall (1993), Osborne (1987), Chaniotis (2005, 2011) and Thorne (2001), which are themselves responses to Hanson, are particularly important to this study.

much attention to the consequences upon productivity of the *chora* in the aftermath of conflict, though this is an area that I identify as having had long-term consequences for affected populations.

Transformation of Peoples and Landscapes Following Warfare

During a siege, much of the countryside was temporarily abandoned by its human inhabitants and lay dormant, in a productive sense, until these individuals felt it was safe to return. Yet these landscapes did not remain static, and often underwent great transformations over the course of a siege. During an invasion, the invading force became a stakeholder in this landscape, and could reshape the existing space to better meet their own needs, which were often dramatically different to those of the existing population.[54] Between the ravaging activities explored above, and the constructions efforts required by siege warfare, the landscape was transformed both in appearance and functionality. The dormancy of the *chora* likewise provided nature a chance to push the boundaries of her domain, as idle fields might be reclaimed by scrub or forests pushed forth their boundaries.[55] While an invading army would typically depart the region once the siege had concluded, the changes to the landscape persisted. Assuming they survived the siege, the individuals seeking to return to the *chora* would have had to contend with the loss of their homes, fields, orchards, and infrastructure.[56] As I have already argued, these transformations had real impacts to the productive capacity of the space. The destructive capabilities of ancient armies were limited, however, and with time, and a great deal of work, it appears to have been possible to restore the landscape to its former productivity. Yet even when the landscape was physically cleared of debris, the damaged structures had been rebuilt, and lost property had been replaced, the memoryscape would remain, populated with sites of memory that continued to remind observers of the conflict that had occurred in the space.[57]

This is because it was not just the physical landscape that was transformed by war, and those who experienced a siege firsthand, or even just its impacts, could find themselves changed by the experience. Exploring every intangible change that arose within individuals following a siege is far too large a topic to cover in this study, so I have limited my examination to three aspects, all connected with the transformation of the physical landscape. The first aspect I examine relates to the changes in behaviour that arose in affected populations following the sieges of the Peloponnesian War. Being subjected to siege warfare appears to have changed the mental outlook of some communities, making them more fearful and defensive-minded.[58] In Athens for example, a newfound recognition of the importance of the countryside led to dramatic changes in the city-state's defensive strategy, political organisation, and even crop selection. As Harris notes, such changes were not unique to Athens, as siege warfare seems to have served as a particularly potent catalyst, which led to the introduction of several important

[54] Thuc. 2.14, 2.20-1, 7.27; Hdt. 8.50-3; Ar. *Plut.* 560-575.
[55] Chaniotis 2005, 127.
[56] Hanson 1998, 167-70.
[57] Winter 2010, 315.
[58] Ober 1985, 3, 51.

innovations.[59] The second aspect to be examined relates to memory, in both individual and collective forms. The connection between physical sites, such as monuments, and memory was well understood by the Greeks themselves, particularly in connection to warfare.[60] This is an area of great interest in both memory studies and landscape theory, so there is an extensive corpus of scholarly material to draw upon.[61] The majority of this attention has been paid to urban monuments, however, while the sites of memory found across the Greek *chorai* have seen less examination. In my attempt to remedy this I explore both the *chora*'s official sites of memory, created or recognised by city-states following a siege, as well as its unofficial sites of memory such as ruined farmhouses, trampled fields, and abandoned fortresses that might just as easily have triggered a recollection of the siege in the minds of observers.[62] The third aspect I explore relates to trauma, and particularly its connection with physically scarred landscapes in the aftermath of a siege. As Crowley notes, the practice of retrodiagnosing ancient individuals with traumatic disorders is fraught with complications, so I have instead chosen to approach the issue using the framework of traumascapes.[63] This concept, introduced by Tumarkin, refers to landscapes that held an ongoing emotional and painful resonance for a particular community in the aftermath of a traumatic event.[64] This is a concept that has not yet been applied to the Classical world, yet offers rich new avenues for exploration.

Contextualising the Sources

While this is a multidisciplinary study, ancient literature forms the basis of my evidence. Of this ancient literature, it is the histories that serve most prominently. The principal histories I draw upon belong to Thucydides, Xenophon, and Diodorus Siculus, and, to a lesser extent, the works of Herodotus, Plutarch, and Pausanias. Thucydides provides the most detailed account of the events of the Peloponnesian War, though his narrative ends mid-sentence when discussing the events of 411. Xenophon's *Hellenica* picks up immediately where Thucydides finishes, completing the account of the Peloponnesian War and continues through to 362. Both of these authors had experience of military command and were contemporary to the events that they were discussing, granting them specialised strategic insight and authority in this area. [65] Despite this, it is important to note that the authors were present at very few of the events they discuss, so even these works draw heavily upon second-hand information. Conversely Diodorus Siculus and Plutarch were writing much later than many of the events they discuss, and thus were reliant upon the work of earlier histories, most of which are non-extant, and thus the content cannot be verified. Diodorus' *Library of History* was a massive undertaking, covering what he perceived to be

[59] Harris 2020, 193.
[60] Thuc. 2.34.5: Duffy 2018, 56-59; Kinnee 2018, 27.
[61] Pétursdóttir and Olsen 2014; Alcock 2002; Assmann 2011; Schama 1995; Van Dyke 2019; Makins & Reitz-Joosse 2021. Note that countless other examples could be included here.
[62] Sendyka 2016, 694, 699; Tumarkin 2019, 5.
[63] Crowley 2014, 115-116.
[64] Tumarkin 2005, 13.
[65] See Thuc. 4.104-5 for a mention of his role as a siege commander during the Peloponnesian War. Xenophon was principally involved in a Greek expedition into Persia recounted in his *Anabasis.*

the major historical events beginning with the mythical Greek past, down to Caesar's Gallic Wars. While not all of this work survives, the books covering the fifth and fourth-century material most pertinent to this study are extant and provide a much broader account than the other works. Plutarch, meanwhile, had a narrower historical view than the other historians, taking important historical figures as the basis of his works. While Plutarch's biographies do cover many important sieges, these accounts are typically presented in a manner that highlights the central figure's role in the event, rather than encompassing the battle as a whole. Pausanias's *Guide to Greece* is a somewhat different work than the others, mixing historical accounts with descriptions of the monuments and treasures encountered by the author on his (purported) travels through the second century CE Greek world. Pausanias was clearly fascinated with the Greek past, and because the spaces he visits are described as they existed in his own time, the work provides quite different insights than what we find elsewhere. One important caveat for this study is that none of these authors seem to have been particularly concerned with the experiences of everyday individuals, neither in peacetime nor in the midst of a siege. To overcome this, it is important to balance these historical accounts with other forms of evidence.

Because of the varied nature of the ancient literature that has reached us today, we can find glimpses of affairs in the *chora* from several alternative literary sources. Incidental references, found in works ranging from Plato's *Critias* and Demosthenes' *Orations* to the didactic literature of Xenophon and Aeneas Tacticus' handbook on siege defence can all yield valuable material not found elsewhere.[66] The comedies of Aristophanes, meanwhile, provide unique, though highly satirised, glimpses into the inner workings and everyday life of the Athenians. With a critical mindset, scholars have used works like *The Acharnians, Wasps,* and *Peace* to explore the availability of certain foodstuffs, contemporary economic conditions, and public sentiment within the city.[67] Inscriptions likewise serve as useful sources, particularly vital for their recording of the serious business of the city-state and its people. While each of these works offers valuable insights for this study, this is not always easily gleaned, and a more contextual reading is often required. Nor should any of these works be understood as presenting perfectly accurate accounts of the events they describe but must instead be examined carefully and critically. It is important to note that the presence of historical inaccuracies does not in itself invalidate any of these works, and pulling at these inaccuracies may even open valuable opportunities for investigation.

When used alongside the textual evidence discussed above, material evidence allows for new avenues of understanding, as findings can be evaluated against, or used in support of one another.[68] To give just one example, the so-called Nekyomanteion of Ephyra (first excavated by Sotirios Dakaris in 1958)

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[66] Dem. 47.56-60; Pl. C*riti.*111b-d.

[67] See Ar. *Ach.* 35, 247-251, 550; Ar. *Vesp.* 252; *Plut*, 520-526, 550-581, 600-648 for examples of how the Athenians were viewing the Spartan ravaging at the time of the Peloponnesian war for instance. See Foxhall (1993, 139) and Hanson (1998, 68-9) for further examples of how scholars have used Aristophanes in these areas.

[68] James 2013, 93.

illustrates the value of a careful approach that puts archaeological and literary material alongside each other, without using one to "prove" the other. In that case, Dakaris, influenced by a memorable tale in Herodotus' *Histories*, identified the structure as the famous Oracle of the Dead, while subsequent studies have instead interpreted the structure as an example of a fortified farmhouse.[69] In using a mix of literary and documentary sources, material evidence, and a number of theoretical frameworks, such as economic rationalism, memory studies, and landscape theory, I intend to present a holistic approach to the topic, which will ultimately allow for a much more nuanced understanding of the *chora* under siege.

Chapter Breakdown

In the first section of the thesis, I identify those areas of the extra-urban environment that were affected as a consequence of siege warfare. The environmental impacts of ravaging or siege constructions are the focus, with the impacts to the *chora*'s human inhabitants of secondary importance. In Chapter One I examine those areas of the *chora* related to the agricultural and domestic spheres, examining the impact of warfare upon grain fields, farmhouses, livestock, and the human inhabitants themselves. Chapter Two explores a range of additional productive areas of the *chora* beyond the agricultural sphere, including the forests, marginal lands, and water sources, alongside the processing sites that facilitated the industries operating from the *chorai*. Chapter Three introduces military constructions, and sanctuaries, built environments which were beyond the capabilities of individuals and were typically instead the result of larger public projects. Within this section I evaluate two case studies in greater detail to demonstrate the concepts discussed throughout these chapters.

Where the first section of this thesis establishes the breadth of environmental impacts caused by siege warfare, the second section introduces a temporal aspect, and explores the consequences of siege warfare over a more extensive period. In this section, the individual who experienced a siege comes to the fore, with particular emphasis placed on those who returned home to a landscape changed by war. In Chapter Four, I use the findings from Section One to evaluate how returning populations were likely to have fared in landscapes subjected to widespread ravaging and other environmental consequences over the course of a siege. I highlight the issues faced by individuals both in the immediate aftermath of a siege as well as the longer-term impacts caused by extensive ravaging. This chapter emphasises both the tangible consequences of siege warfare, while also exploring the transformed mentalities among those who experienced a siege. Chapter Five then examines the connection between the physically transformed landscapes and the way in which individuals and communities remembered a particular siege. In this chapter I argue that the transformation of a landscape as a consequence of warfare led to the creation of commemorative spaces, known as 'sites of memory,' which could hold and propagate memories of the event in which they were created. I then shift to examine the notion of

[69] Hdt. 5.92: Dakaris 1973; Wiseman 1998, 12-16.

trauma, and how this might have ended up being reflected within a physically scarred landscape. I conclude by exploring the ramifications of living in such an environment, and how this might have modified the worldview of affected peoples.

Section One: The Environmental Impacts of the Siege

Chapter One: The Impact on Agricultural and Domestic Elements of the Countryside

Agriculture served as the backbone of both the food supply and economy of ancient Greece and was almost entirely carried out from within the *chora*, barring a few minor, though important, exceptions.[1] In this chapter I examine the variety of impacts that a siege could inflict upon the fields, the vineyards and orchards, agricultural infrastructure, livestock, and the human inhabitants that occupied and worked these areas. I explore in turn why each of these areas might have been targeted by besieging armies over the course of a siege and evaluate the environmental damage that was likely to have resulted as a consequence. Finally, I use a case study of the Athenian siege of Potidaea to examine how a region's food supply could be affected over the course of a lengthy siege. This particular example has been chosen as it demonstrates the consequences of environmental devastation for both the besieged and the besiegers, who were each forced to endure miserable circumstances as a result.

Grain and Vegetable Fields

Grain served as the primary means of sustenance for Greek city-states, with grain fields accounting for much of the agricultural landscapes of the Greek world.[2] Of the roughly 240,000 hectares that constituted Attica, estimates suggest that around forty percent was cultivatable, and only half that percentage was actually cultivated.[3] Of the cereals, wheat and barley were of primary importance, serving as two of the five crops that the *ephebes* swore to defend as part of their duties protecting their homeland, alongside olives, grapevines, and figs.[4] Foxhall and Forbes have predicted that grain accounted for approximately 70-75 percent of a Greek individual's calorie intake, meaning that successful grain harvests were vital for the wellbeing of the city-state and its populace.[5] While many city-states appear to have been self-sufficient in their grain production, others, most notably Athens, relied on imports to make up the difference.[6] Alongside cereals, the Greek diet was supplemented by a variety of other foodstuffs including vegetables, olive oil and wine. While the practice of vegetable farming in ancient Greece is less well understood than its Roman counterpart, it is clear that the Greeks

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[1] The exceptions I refer to here include cities built with a *Geländemauer* circuit (discussed in Chapters Three and Four) and small-scale gardening (discussed in Chapter Four). While these areas were probably relatively insignificant in the scheme of overall peacetime food production, in times of siege they were likely incredibly important, as they allowed some level of continued food production despite the city being cut off from the countryside.

[2] Foxhall and Forbes 1982, 41, 74; Bresson 2015, 119-120.

[3] Moreno 2007, 10-11; Akrigg 2019, 221. Garnsey 1988, 91 bases part of his argument on the IG I2 1672 Eleusinian First Fruits decree, which ostensibly reveals production figures for the year of 329/8 BCE. As Moreno (2007, 13-14) notes, this does not result in an unproblematic transposition to determining fifth century land usage. Ultimately, however, the figures each arrive at are not wildly dissimilar.

[4] Bresson 2015, 118. See *SEG* 33 115 for the surviving oath of the ephebes, believed to be authentic. Further discussion of the Athenian *ephebes* can be found in Chapter Four.

[5] Foxhall and Forbes, 1982, 71; Bresson 2015, 119.

[6] Garnsey 1988, 104-5; Ober 1985, 25-7.

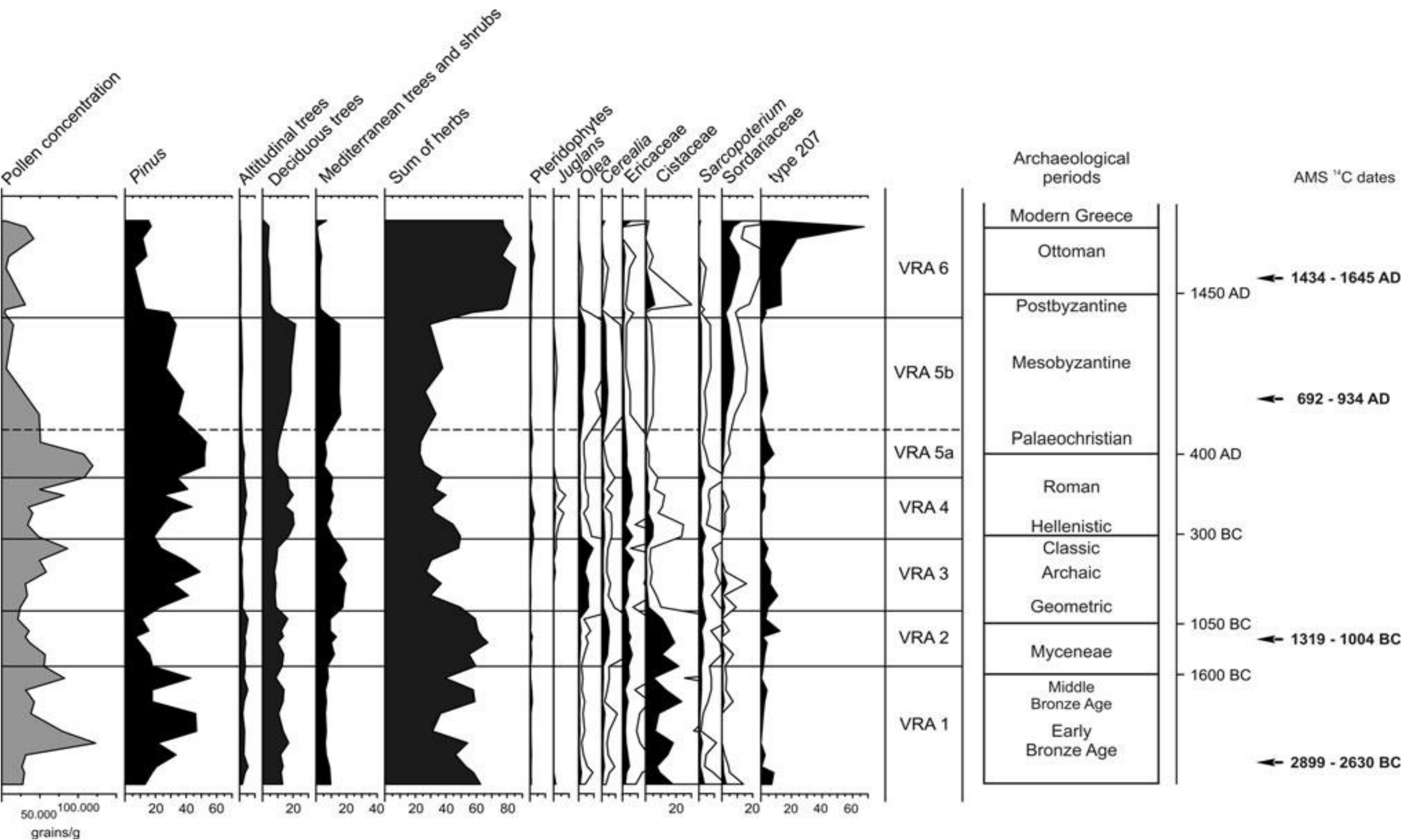

Figure 1: Palynological Data for the region of Vravron (ancient Brauron) in Attica across the last 5000 years. The VRA-3 period is of interest to this study. Of the species Olea *(olives) and* Cerealia *(cereals) are primarily discussed. (From Kouli 2012, 272)*

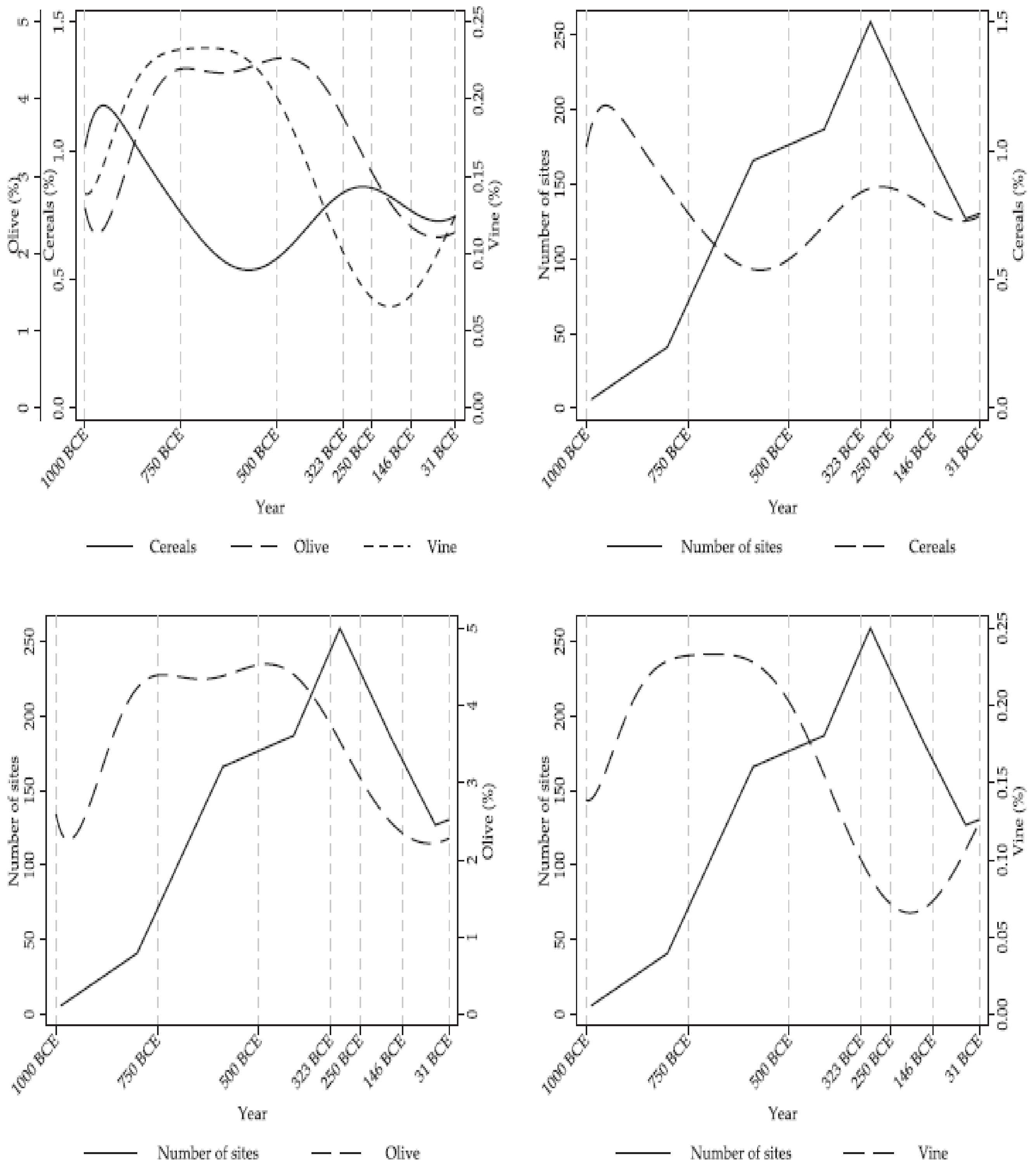

Figure 2: Simplified pollen data derived from southern Greece. These charts show relative cereals, olives, and grape vine pollen percentages charted against the number of settled sites for the southern Greece region. (From Izdebski et al. 2020, 2604).

were involved in growing and consuming a range of vegetables.[7]

There is only very limited detail recorded by ancient authors concerning crop selection, so researchers have turned to alternate methods to determine the specific crops grown by ancient farmers.[8] Palynology serves as an insightful method for uncovering the floral makeup of the Greek *chorai*. By analysing the pollen data collected from particular sites, it is possible to determine what (approximate) percentage of the total biosphere in that region was devoted to specific plant taxa. Not only does this provide a snapshot of what was being grown in a given period (accounting for some variance in the date) but also indicates how the ratio of particular crops changed over time. For example, we can use this data to examine shifts in the ratio of cereals to olives in a particular region to see which crop was favoured. These pollen studies have been conducted in a number of areas, including Attica and the Chalcidice, and have also been collated into groups to determine wider trends in southern or northern Greece, for example.[9] In the case of Athens, the pollen record reveals that olives and grapes were being prioritised by farmers over cereals in the leadup to the Classical period (see Figures 1 and 2). The development of cereals in Attica was thus in a relative decline in this period, likely due to the growing empire's access to grain sources from abroad.[10] Notably, in the fourth century, when Athens lost her empire, cereal percentages climbed significantly in the pollen record, suggesting that farmers had shifted more of their farmland back to the growth of cereals. This phenomenon demonstrates how the local biosphere could change in reaction to external events, both on the micro-scale as individual farmers selected what crops to plant, and on the macro scale, as the ramifications of larger political actions trickled down to affect a host of other areas, as will be further explored in Chapter Four.

The targeting of grain fields was a central element of ancient warfare, routinely carried out by almost all Greek armies.[11] The practice and methods of destruction of grain fields is a topic well examined by scholars in this area, and there is general agreement that this ravaging was both widespread and central to the ethos of Greek warfare.[12] Hanson argues that this raiding and destruction was not an afterthought, but instead a well thought-out and supplied endeavour, with special groups of raiders, separate from the main hoplite force, assigned and equipped particularly for this role. They carried specialised equipment including sickles and "wood shafts," and brought wagons to carry off looted produce.[13] Even a non-specialised force could readily damage grain fields via trampling or burning, though this required the

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[7] Cato, *Agr.* 1.7: Thibodeau 2016, 637-8; Foxhall and Forbes 1982, 45 n.10, 74; Bresson 2015, 130; Kron 2015, 169-171.

[8] The IG I2 1672 Eleusinian First Fruits decree introduced in Footnote 3 is one of the stronger pieces of literary evidence, but only gives us data from Attica for a single year in the late fourth century, so we must be careful extrapolating this data across other years and locales.

[9] Panajiotidis & Papadopoulou 2016; Weiberg *et al.* 2019; Izdebski *et al*, 2020; Kouli 2012.

[10] Garnsey 1988, 105; Izdebski *et al.* 2020, 2605; Moreno 2007, 143.

[11] See Xen. Hell. 4.7.1-13, 4.8.4-6; Thuc. 2.21, 3.2, 4.2, 6.94; Diod. Sic. 13.47.3-5, 14.90.5-7, 15.59.3-4. For a tiny fraction of the many examples.

[12] Hanson 1998, 5, 10-12; Foxhall 1993, 134-5. There are however disagreements on the resulting impact that this ravaging had upon a city-state, as will be explored in Chapter Four.

[13] Thuc. 5.72; Plut. *Vit. Cleom.* 26.1: Hanson 1998, 30-31.

right seasonal conditions, and was almost certainly a less efficient method of destruction.[14] As Foxhall highlights, however, the Greek countryside was made up of several different terrain types, many of which could present difficulties for ravaging bands.[15] While raiding the low-lying plains would have presented relatively few obstacles, areas with rocky terrain or terraces would have required a great deal more care and effort to manoeuvre, particularly for those on horseback. While the practice of terracing receives seemingly little mention in the contemporary literature, and the precise dating of discovered terraces in the landscape can be difficult to periodise, recent research carried out in areas such as Atene and Euonymon in Attica, as well as on the Islands of Keos and Sphakia, supports the idea that many fourth and fifth century individuals were engaged in the construction of terraces in at least some form.[16] Yet another hindrance to raiding efforts can be seen in Methana, Troizen, where grain fields were dispersed across a range of altitudes.[17] This would have meant that the same grain plants might ripen months apart, and, as raiding bands often timed their attacks with the ripening window of the grain plants, this staggered ripening would make attempts to systematically ravage the fields more difficult.[18] Specific references to vegetable fields being ravaged do appear in the ancient literature, though less frequently. In Aristophanes' *Acharnians*, for example, a Megarian farmer complains that Athenian invaders would uproot garlic crops during their forays into Megarian territory.[19] Because these vegetable fields would have been located within the same agricultural areas as other crops, Greek authors probably assumed that the reader would understand vegetables to have received the same treatment by raiding bands that grapevines, fruit trees, and grain did.[20]

Wanton destruction was not the only goal of ravaging, and besieging armies could seize the produce of the fields to bolster their own food supplies. In this way they could sustain their own forces at little cost to their city-state, or themselves (depending on who was responsible for supplying that particular campaign).[21] This method was particularly pragmatic during siege warfare, as it served the dual purpose of denying food to a besieged populace, while simultaneously supporting the greater troop numbers needed to effectively encircle an enemy stronghold. While the struggles of supplying and rationing food within besieged cities are well understood, it is also clear from ancient sources that supplying enough food to feed a besieging army was a recurring issue.[22] This problem would have worsened as the duration of the siege extended, and it is likely the area subjected to raiding and ravaging must have

[14] Hanson 1998, 30-32; Foxhall 1993, 140.
[15] Foxhall 1993, 137-140.
[16] Bintliff 2012, 307; Lohmann 1993; Moreno 2007, 54-58; Price and Nixon 2005, 671, 674-77.
[17] Foxhall 1993, 140.
[18] Foxhall 1993, 140.
[19] Ar. *Ach*. 763.
[20] Hanson 1998, 49, 218-9.
[21] Hughes 2013, 130-31; For discussion of the provision of rations to soldiers see Foxhall and Forbes 1982, 54-7; Van Wees 2007, 276; Hanson 1998, 33-34.
[22] Thuc. 7.13; Pl. *Sym*. 220a-e: Garnsey 1988, 37.

expanded over time, with invading forces needing to travel further and further afield in their continual search for new sources of sustenance.

In terms of the environmental impact of this ravaging, both destruction and theft led to the loss of that year's harvest for the besieged population. Regardless of whether the crops were harvested by locals, destroyed by invading forces, or simply rotted, a new crop would have to be planted in order for the field to be productive again. While cutting, trampling, or burning fields could certainly have a detrimental impact to existing crops, the soil itself would not have been detrimentally impacted, in terms of future productivity, and there might even have been some productive benefits were ash to cover the fields. The biggest threats were probably the loss of the seed needed for the next planting, and the undoing of the shaping efforts, such as terracing, irrigation and furrowing that affected the productivity, or even viability, of future yields.[23] Bresson suggests that around 15 percent of a grain yield would need to be kept as seeds to facilitate the next planting, and it is unlikely much could be salvaged after ravaging bands had moved through.[24] Foxhall argues that the restoration of damaged landscaping efforts would likely have required significant effort to restore, arguing that terracing in particular would have involved a high labour cost, though this restoration was probably not too difficult a task under normal circumstances, and much of the arduous labour was likely to have been carried out by enslaved individuals.[25] There were likely many obstacles introduced following a siege however, where the labour force (both free and enslaved) was often diminished and exhausted, and those willing to sell their labour could command a high price due to soaring demand, This likely slowed the restoration of the fields in the post-siege period, and had sequential impacts on short-term productivity as will be further argued in Chapter Four. Barring these issues, however, the ravaging of a single harvest would have only had a relatively short-term environmental impact. Provided there was seed available, and the land remained cultivatable, growth could be expected to resume relatively quickly once access to the fields had been restored. Hence, we find reports in the literature of certain areas being ravaged in successive years, highlighting that regrowth was occurring in between invasions.[26] That is not to say this tactic had no lasting impacts, but rather that the impact was greater upon the local populace, rather than the environment itself. This ravaging affected the food supply, particularly in the shorter-term, but could also cause a detrimental psychological impact to those who saw the efforts of their labour being burned or stolen by invading forces—aspects that will also receive further examination in Chapter Four.

Orchards and Vineyards

As previously noted, olives and vines became increasingly important crops leading up to the Classical period, and they, alongside cereals, formed what some term the "Mediterranean Trilogy."[27] With some

[23] Hanson 1998, 176-7.
[24] Bresson 2015, 168, 201; Thibodeau 2016, 633.
[25] Foxhall 1996, 51, 59; Kvapil 2012, 91-3.
[26] Diod. Sic. 12.42, 45, 52; Thuc. 2.21, 3.1, 4.2.
[27] Bresson 2015, 119; Thibodeau 2016, 635.

preparation, olives could be eaten as fruit, though they were primarily processed into oil. The lipids contained within olive oil served as an integral source of nutrition in a society that ate little meat or dairy. Olive oil had additional uses in areas such as lighting, soap-making and even for anointing the body.[28] Grapes, meanwhile, were principally converted into drinking wine, and, with the average Greek male estimated to have drunk up to a litre of wine per day, were always in demand.[29] While important supplements to the Greek diet, olives and grapes were not considered subsistence crops in the same way that grain was, but gained recognition as trade crops.[30] The relative increase in the selection of trade crops over cereals seems to have been connected with ongoing developments in regional trade networks which brought the Greek world into closer contact with neighbouring states.[31] Greek individuals likely viewed it as more cost effective to produce and export olive oil and wine, while simply purchasing any required cereals from markets locally or abroad.[32] A number of additional fruit-bearing trees, such as the fig, almond, walnut, and apple could be found across the ancient countryside, though they appear less frequently in the pollen record (see Figures 1 and 5). The fig seems to have been the most important species besides the Mediterranean trilogy, at least in Athens, as it was the fifth crop specifically referenced in the Oath of Ephebes mentioned earlier.[33] Walnuts, meanwhile, served a much more important role in the northern areas of Greece, which fell outside of the olive distribution zone.[34]

Fruit trees could be found across the landscape in both wild and cultivated forms, the latter both individually and in extensive orchards. The olive tree is indigenous to the Mediterranean though it was human favouring that led to its ubiquity within the Greek landscape. While olives can grow in poor soil or stony ground, this is not conducive to rich harvests. To get the best results, much like grain farming, the ground had to be well prepared in advance of planting, ensuring the soil was rich and irrigated. Vineyards could be frequently encountered on the unterraced hills and stony areas of the *chora*, as grapevines were able to be grown in these areas that were unsuitable for cultivating olives or cereals.[35] Viticulture still required a great deal of labour, and it usually fell upon enslaved individuals to carry out the digging of trenches and staking that the vines required to thrive.[36] The practices involved with the planting of fig and other fruit trees are less clear, though they seem to have required less careful management than olives or vines, and were likely to have been included in family farms or in market gardens.[37] A range of supporting infrastructure was developed around these cultivated areas, including

[28] Bresson 2015, 127-8.
[29] Bresson 2015, 122.
[30] Olives were reportedly the only agricultural product allowed to be exported in Solon's Athens. Plut. *Vit. Sol.* 24: Isager and Skydsgaard 1992, 145-6.
[31] Izdebski *et al.* 2020, 2615-6.
[32] For an example of such a calculation see the example for Euonymon in Attica in Moreno (2007, 65-66).
[33] Bresson 2015, 118; *SEG* 33 115.
[34] Weiberg *et al.* 2019, 749.
[35] Bresson 2015, 123.
[36] Bresson 2015, 123.
[37] Thibodeau 2016, 636-7.

olive presses and wine-treading floors, as well as storage areas for harvested crops and tools. This infrastructure will primarily be addressed in Chapter Two.

Because olives, vines, and other fruit bearing trees served as an ongoing source of produce once they had reached maturity, they were normally far too valuable to even consider using for purposes such as firewood or timber. In fact, there were even legal protections against uprooting olive trees in Athens, highlighting the importance of the olive to the state and its people.[38] This is perhaps best evident in one of Lysias' *On the Olive Stump*, where an Athenian landowner was brought to trial on the charge of removing the stump of one of these sacred trees.[39] In times of desperation however, such as during sieges, these concerns could be overridden, and an invaded people might choose to sacrifice their own trees for material with which to bolster the city-state's defences.[40] Typically, however, destruction was far more likely to have been caused by the invading force. Much like with grain in the fields, any fruit remaining on trees or vines would be taken by ravaging bands and used to bolster the besieging force's supplies. Invading armies appear not to have been overly concerned about where they sourced their timber or firewood, and there are numerous references to fruit trees and vines being chopped down for fuel or materials to construct camps and other defences.[41] During the Spartan siege of Plataea (429-427), the Spartan army constructed a massive timberwork structure in their attempt to overcome the Plataean garrison. The timber needed for this construction was in addition to that required for the standard encircling walls, defensive towers, and military camps. Collecting such a large amount of timber required the felling of huge numbers of trees from the local area, and the Spartans were reportedly unconcerned as to whether these trees were fruit-bearing or not.[42] In a similar context to the destruction of grain fields examined earlier, there was a psychological element to the felling of fruit trees, as besieged individuals were often helpless to prevent the source of wealth and sustenance that they had invested much time and energy into being damaged by an invading force.[43]

The complications presented to raiders seeking to damage olive trees were made clear by Hanson, and most scholars have come to agree with his findings.[44] While raiding parties do seem to have had access to the necessary equipment and skills to damage olive trees, the destruction of each individual tree would have been an arduous task and required a considerable amount of time.[45] Burning and uprooting were often too unreliable or too labour-intensive during wartime, so cutting appears to have been the standard means of damaging these trees. Despite the complications outlined by Hanson, during sieges

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[38] Dem. 43.71.
[39] Lys. 7
[40] Thuc. 6.99.
[41] See Thuc. 4.69, 90; Diod. *Sic.* 12.45.1-4, 14.80.1-2 for a few examples.
[42] Thuc. 2.72-7. Shackleton and Prins (1992) have examined the way in which ancients selected trees for felling using the 'principle of least effort' model, which may be applicable here.
[43] Hanson 1998, 39-41, 68.
[44] Hanson 1998, 55-68; Foxhall 1993, 138; Hughes 2013, 131-32; Krentz 2007, 171.
[45] Hanson 1998, 55-67.

raiders would have had more time, and greater reason, to devote their efforts to the destruction of orchards as they endeavoured to undermine the morale of the besieged. The impact to vines and other fruit trees is less explored by Hanson, though Foxhall suggests that vines in particular would be very susceptible to destruction, as the locations where they could be found were more accessible to raiders, and because of their frailty once initially damaged.[46] While cereal crops could be regrown within a year, provided one could spare the labour and resources required to plant a new crop, the restoration of damaged fruit trees was vastly different. Where a destroyed barley plant resulted in a loss of that year's produce, a destroyed olive tree represented a much lengthier loss of productivity.[47] As Sallares notes, even once replanted, a more passive farmer may not see any produce from that tree for 15 years, and it would only achieve maturity and full output some three to five decades later.[48] While this period could be reduced by farmers employing more intensive techniques, such as grafting, landscaping, and fertilisation, this involved significant labour costs, and would still take upwards of five years before seeing any return on investment.[49] Farmers leasing land would have to consider whether it was worth reinvesting their time and effort in crops with such a long lag time. Even if a 50-year lease were secured, a third of the productive time could be lost following the destruction of an orchard, and as evident from Lysias 7, many lease periods were significantly shorter than this.[50] Ultimately individuals were unlikely to invest significant effort in growing crops that they would receive no financial benefit from, particularly when they held concerns that their lands may be ravaged in successive invasions. This likely goes some way to explaining why many Athenian farmers seem to have shifted to cereal cultivation in the aftermath of the Peloponnesian War.(see Figures 1 and 2).

Agricultural and Domestic Structures

As noted in the introduction, much of the Greek populace was involved in farming in some fashion, regardless of level of wealth.[51] The frequency of overlap between domestic structures and agriculture sites in the ancient Greek *chora* is significant enough to have resulted in 'farmsteads' becoming the standard mode of thinking about these structures in the scholarship.[52] Alongside farmhouses, a host of infrastructure designed to support agricultural activities could be found in farming regions, including barns for housing livestock, processing sites such as threshing floors and olive presses, and even fortified towers for security. Archaeological surveying has proven one of, if not the best, means of uncovering evidence of regional occupation, and field surveys have been carried out for numerous

[46] Hanson 1998, 68-71; Foxhall 1993, 139.
[47] Hanson 1998, 65-67. This is because the olives trees used by the ancient Greeks could require as long as seven years to reach maturity, and replanting efforts could not begin in the midst of a siege.
[48] Sallares 1991, 308.
[49] Hanson's (1998, 66-68) argument for a three-to-seven-year range for recovery seems very optimistic in comparison.
[50] See Lysias 7 for evidence of short lease periods. See Isager & Skydsgaard 1992, 155 and Moreno 2007, 64-66 for further discussion.
[51] Hanson 1998, 1; Osborne 1987, 13.
[52] Foxhall 2020, 15; McHugh 2017, 6-7.

regions, including Boeotia,[53] Atene in Attica,[54] Laconia,[55] the Argolid,[56], and recently in the Mazi Plain,[57] to name just a few examples.[58] As Snodgrass highlights, the examined areas represent only a tiny percentage of the total Greek landscape, and there is still much work to be done in the area.[59] When excavated, farmhouses have yielded material evidence suggesting both domestic activities (through furniture such as beds and tables, well equipped kitchens, as well as attached grave sites) and agriculture activities (through pollen samples, the remains of beehives, or carbonised remains of cereals, among other things) were occurring at the site.[60] Farmsteads were involved in a range of productive activities beyond agriculture, whether that be pottery making, weaving, or processing crops, though these aspects will be explored in Chapter Two.[61] The farmsteads of the Greek *chorai* thus produced a wide range of the everyday goods and supplies required for the functioning of the city-state. McHugh's breakdown of the agricultural calendar (Figure 3) demonstrates the variety of activities that households could be involved with, but also how reliant Greek farmers were on maintaining order and routine.[62] Because of this reliance on the seasons, farmers were particularly susceptible to the disruptions caused by warfare.

Unfortunately for farmers, these farmsteads made particularly valuable targets for invaders seeking booty and supplies, as well a means of antagonising and upsetting those sheltering within a stronghold. The ancient Greeks seem to have stored their produce and foodstuffs on site, typically in storage containers (*pithoi*) within the farmhouses themselves.[63] Ideally, any stored supplies would be transported to safety before an invading army arrived, though Thorne has highlighted the logistical challenge that this presented. In addition to seizing abandoned foodstuffs, invaders seem to have sought out the agricultural implements, furniture, and cookware found in these properties, which they could repurpose once they had returned home.[64] It was not only the goods contained within the structures that were plundered, as we find reports of the very materials that made up these structures being carried off by besieging forces. A besieging force typically established a host of infrastructure to support their siege effort including military camps, circumvallation walls, and defensive towers. As these constructions were often time-sensitive projects, the closest fit-for-purpose materials were likely to have been selected. Thus, the already processed timber and bricks found in existing structures were repurposed, freeing the besiegers from hauling construction materials from their home territory, and reducing their need to

[53] Bintliff and Snodgrass 1985.
[54] Lohmann 1983.
[55] Cavanagh 2003.
[56] Jameson *et al.* 1994.
[57] This is part of the Mazi Archaeological Project. See https://www.maziplain.org/ for a list of projects and contributors.
[58] For an overview of further examples see Bintliff 2012, 270-274. On the importance of field surveying see Snodgrass 2006, 451; Osborne 1987, 56-7; Bresson 2015, 56-7; McHugh 2017, 5-6.
[59] Snodgrass 2006, 452.
[60] Foxhall 2020, 10-13.
[61] Foxhall 2020, 10-13; McHugh 2019, 214.
[62] McHugh 2019, 215.
[63] Curtis 2001, 278; McHugh 2017, 57.
[64] McHugh 2017, 60; Hanson 1998, 106-110.

gather and process raw materials from the local environment. The Athenians used materials from nearby houses during their siege of the port of Nisaia at Megara for example, as well as during their fortification of Delium, both of which occurred in 424.[65] Invading forces even tore down houses to use the material as filler for the moats and ditches that were hindering their strategic operations.[66]

Following the looting, invaders often turned to the destruction of agricultural sites, which seems to have been primarily undertaken to antagonise or demoralise a besieged enemy force. As with the destruction of olive trees examined previously, it would not have been time-effective to wholly dismantle or demolish each and every structure they encountered. While burning would not necessarily leave every household in utter ruin, it was the easiest and quickest option available to raiders, and thus the most frequently mentioned method of property destruction in the literature.[67] Hanson suggests that burning would usually be enough to collapse the wooden framework of these rural structures, though was unlikely to have extensively damaged the foundation or stonework. While any flammable materials and possessions would have been lost to the flames, the survival of the foundation likely allowed for a relatively quick rebuilding of the basic structure once the owners were able to return, provided the necessary materials were attainable in the aftermath of a conflict.[68] In periods of more extensive occupation of enemy lands, invaders were likely to have been more able, and perhaps more willing, to devote the time and energy to more thoroughly damage or loot those elements that would have been more difficult and costly for the owners to replace, such as roof tiles.[69] The true value of property destruction probably lay in the psychological reaction of the properties' owners, who would ideally be driven into rage or despair at their loss.[70] In his military handbook Aeneas discusses a stratagem whereby one group of soldiers would raid and pillage nearby homesteads, while a second group would wait to ambush the owners coming to save their property – a tactic well known to the Spartans.[71] Thus, in situations where maintaining morale was especially important, as with sieges, the burning of properties would have continued in tandem with other raiding activities for the duration of the military occupation. Hence, we find the Spartans continuing to ravage the landscape of Attica for almost the entirety of the Peloponnesian War.[72] There may have also been a cathartic element to both the raiding and destruction of enemy property, as bored besieging soldiers were able to vent their frustrations on the properties of those resisting their assault, while potentially enriching themselves at the same time.[73]

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[65] Thuc. 4.69, 4.90.
[66] Diod. Sic. 13.86.3.
[67] See Diod. Sic. 12.78.1-3, 14.97.5 and Xen. *Hell.* 6.5.15 for specific mentions of the activity.
[68] Hanson 1998, 72-4.
[69] *Hell. Oxy.* 17.4: Hanson 1998, 73-4, 109-110.
[70] Thuc. 2.21: Hanson 1998, 71.
[71] Aen. *Tact.* 16.2; Thuc. 2.20.
[72] Thuc. 2.21, 3.1, 4.2, 7.19-27; Diod. Sic. 12.45.1-4; 13.9.1.
[73] Alexander the Great was notable for taking soldiers on side forays while besieging settlements, See Plut. V*it. Alex*. 24 for an example during the siege of Tyre. The burning of Persepolis may have also been caused by a comparable situation See Curt. 5.75-10: Morrison 2001, 42.

Month	Sept-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-April	April-May	May-June	June-July	July-Aug	Aug-Sept
					AGRICULTURAL JOBS							
Cereals and legumes	manuring and field clearing				fallow ploughing					fallow ploughing		
		ploughing and sowing cereals and legumes				weeding cereals			cereal and winter legume harvest			
Vines and trees	vintage and pressing									threshing and crop processing for storage		
			trenching, manuring, pruning vines			vine and tree digging and pruning		earthing up trees	earthing up tree and vine trenches			
	fig harvest	trenching, manuring, and pruning other fruit trees, planting trees					grafting		fig fertilizing			fig harvest
	watering	olive picking, pressing (every second year), trenching, manuring, pruning olive trees						watering young trees		watering young trees and vines		
Husbandry			lambing and kidding		lambing and kidding							
					sheep and goat milking and processing				milk processing			

Figure 3: The Ancient Greek agricultural calendar. (From McHugh 2019, 215).

This widespread destruction also sent a clear message about the consequences of resistance to the next group that the invaders targeted.

Livestock and Domesticated Animals

Of the non-human fauna that inhabited these environments, domesticated animals seem to have been most impacted by these invasions. The Greeks raised a variety of animal species, ranging from horses and oxen to geese and bees.[74] While meat was eaten on occasion, particularly during festivals, it did not form part of the staple diet.[75] Livestock were thus not typically raised for their meat, but were rather valued for the ongoing labour or goods they could offer to their owners. [76] Thus, sheep and goats were valued for the milk and wool they produced, oxen served as a source of powerful labour, useful for haulage and ploughing, while horses were prized for military purposes. Animal manure likewise served as an invaluable resource for farmers and played an invaluable role in fertilising the fields.[77] While Aristotle considered an oxen an integral part of any budding farmer's household, because of the considerable expenses involved with raising animals, larger animals were almost certainly out of reach for less wealthy individuals.[78] The initial capital outlay to purchase a larger animal, combined with the ongoing costs of feeding the animal—who required at least as much grain as a human—must have limited their ownership to landholders already boasting surplus wealth.[79] The payoff for such costs was a source of ongoing productivity and wealth for their owners. Smaller animals, such as geese, would likely have been accessible to a greater percentage of the populace, as they required less space and fewer resources per animal, though they obviously could not assist with labour. Similarly, beekeeping probably offered a relatively low capital way to generate additional produce or income, and evidence of beehives has been found in the material remains of several farmhouses.[80] As Flannery notes, farmed animals could also serve as an indirect form of storage.[81] In times of peace and stability the animals could be fattened on surplus grain, while in times of dire need, the same livestock could be immediately culled or sold, providing their owners with food or cash as necessary. All of this resulted in livestock becoming one of the key agents of productivity in the *chora*, as well as vehicles of wealth.

Because of their value, the theft of horses, sheep and cattle occurred frequently during invasions.[82] Making off with livestock was a much easier proposition than with many other forms of wealth, due to the animals' inherent mobility. Defending the animals, meanwhile, was not an easy task during times of siege. One solution was to ferry the animals to safer grounds or allied territory before the invaders

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[74] Chandezon 2015, 136-7.
[75] Garnsey 1999, 16.
[76] Chandezon 2015, 136. Pigs seem to have been the exception here, being seen as only useful for their meat.
[77] Snodgrass 2006, 456; Thibodeau 2016, 629.
[78] Arist. *Pol.* 1252b9-15: See also Sallares (1991, 312) who argues that many farmers would have been able to successfully farm their land despite not owning any oxen.
[79] Halstead 2014, 290.
[80] Foxhall 2020, 13.
[81] Flannery 1969, 87.
[82] See Paus. 3.8.4, 3.9.9 and Ar. *Ach.* 1023 for examples.

arrived, thus placing them out of harm's way.[83] This was the choice of the Athenians at the beginning of the Peloponnesian War, who removed their herds to the safety of Euboea while the danger persisted in their own territory.[84] Such a refuge was not always available so other peoples elected to bring their herds into the cities or strongholds alongside the populace. This required that there to be enough room for the animals alongside the already swelled population taking refuge, and enough grazing grounds or spare fodder to keep them alive.[85] There was always the difficult option of immediately butchering the animals, thereby boosting the immediate food supply, though at the cost of sacrificing any ongoing productivity that the animal could have provided should they survive the siege. This method would have become more palatable in dire circumstances, such as when a city was expecting to endure a lengthy siege, and immediate food needs superseded other concerns. In situations where there was little time given to inhabitants to prepare for an attack, animals might have been left to fend for themselves. Over the course of an occupation of the countryside, the loss of livestock to raiders could be huge. As recorded by Thucydides, one of the major impacts of the Spartan fortification of Decelea was the loss of "all the sheep and farm animals" in Attica.[86] "All" is probably an exaggeration, but we can reasonably assume a significantly large percentage of Attica's farm animals were lost in this period of the war.[87] Because this theft represented a loss not only of the resources invested into the animals up to that point, but also of future productivity. the loss of livestock likely played a considerable role in hindering the restoration of economic activity in the city-state following a siege, as will be explored in Chapter Four.

Analysing the Impact to Human Populations

Just as domesticated animals formed part of the environment of the *chora*, so too did the humans who occupied the space. As one of the principal forces shaping this environment, shifts in human populations could have dramatic consequences upon the landscape.[88] A reduction in population levels could lead to less of the landscape being cleared for agricultural purposes, while previously worked fields that lay untended due to the loss of workers might be reclaimed by nature over time. Conversely, as the human populations increased, more of the landscape might have been devoted to agriculture, and existing farmland may have been worked more intensely in order to provide enough food to support this greater population. Significant population decline likely occurred following siege warfare, as a consequence of deaths in battle, starvation among those trapped in a besieged city, or due to individuals fleeing the region to avoid the chaos of the war. [89]

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[83] See Xen. *Hell.* 4.5.1, 4.6.4 for examples.
[84] Thuc. 2.13-4.
[85] Demad. 1 14: Hanson 1998, 114-115.
[86] Thuc. 7.27.
[87] It is unclear whether this includes the animals earlier sent to Euboea, brought back to Attica, or whether Thucydides is referring to a distinct set of animals. See Hornblower 2008, 592.
[88] Tucker (2012, 324) suggests the dislocation of rural populations was the most significant environmental impact of premodern warring, for example.
[89] Akrigg 2019, 161.

Battle Casualties and Siege-Related Deaths

The greatest threat to the lives of the besieged arose when a stronghold fell, and they found themselves at the mercy of their enemies. Mass slaughter was probably uncommon, though several examples do appear in the literature, including Melos in 416, Selinus in 409, and one famously ordered, but later rescinded, by the Athenians at Mytilene in 427.[90] Even where the besieged were able to successfully resist the besiegers, and thus spare themselves from massacre, sieges could be deadly affairs even for non-combatants. This was particularly true of situations where food supplies were exhausted, and we find reports of besieged peoples being reduced to starvation, and even cannibalism, as reportedly occurred in Potidaea during the Athenian siege.[91] Disease, though not a direct consequence of siege, could be exacerbated by the confinement of a besieged population, though this seems to have been relatively rare. Athens serves as the principal example here, as the city-state lost huge swathes of its population to plague in the early years of the Peloponnesian War.[92] While the sieges of the period typically revolved around encirclement and blockade, rather than large-scale battles, many individuals still fell in combat. Assaults upon a stronghold had to be repelled at any cost, while skirmishes, sallies, and counterattacks all put pressure on the besieging force. These battle deaths overwhelmingly came from the adult male population, which likely hindered restoration efforts in the years following a siege.

The corpses of those killed during warfare might also have had to be managed by those seeking to occupy the space. For the most part, the Greeks collected their own dead from the battlefield, either for cremation or for burial in a collective mound. A number of non-Greek peoples reportedly did not share these concerns, and the Gauls, for example, abandoned their dead "not caring whether they were buried or fed [upon by] wild animals or the birds," much to the astonishment of the Greeks.[93] It was only in the direst of circumstances that Greek bodies would be similarly left to the elements, as was the case following the Athenians' failed siege of Syracuse, where the Athenians were forced to leave their injured and fallen comrades behind during a disastrous retreat.[94] The notion that the bodies of the slain and wounded might have been able to fertilise nearby fields features in a number of ancient works, though many of these are fictional, and there is little explicit evidence to ground the practice in an ancient Greek context.[95] Bones do seem to have been used as fertiliser following conflicts in other

[90] Diod. 12.80.5, 13.57; Plut. *Vit. Alc.* 16; Thuc. 3.36-50. See Pritchett 1991, 218 for a collated list of the massacres referenced by ancient historians. Kulesza (1999, 151) points out that many of these cities ended up rebounding after some time, despite situations where "all" of the inhabitants had reportedly been killed, suggesting that many among these populations had fled the war and returned to resettle the area in its aftermath.
[91] For examples see Thuc. 2.70; Xen. *Hell*. 2.2.5, 6.2.8; Diod. Sic. 14.111.1-3.
[92] Thuc. 2.48-55: McNeill 1998, 120-21.
[93] Paus. 10.21.4.
[94] Thuc. 7.45, 72; Diod. Sic. 13.17.4-5: Hornblower 2008, 703. Diod. Sic. 14.71.1-2. reports that during the Carthaginian siege of the same city in 397, the Carthaginian besiegers refused to touch their dead due to a plague ravaging the army, presumably leaving the clean-up to the Syracusans yet again.
[95] See Aesch. *Sept.* 587–8 for a Greek example and Plut. *Vit. Mar.* 21.3; Verg. *G.* 1.491-7; Hor. *Carm.* 2.129-30; Ov. *Her.* 1.51–6 for Roman examples. See Zientek (2021, 92-6) and Makins 2021, 139) for further discussion of this topic.

historical periods, for example, following the 1815 Battle of Waterloo.[96] While I think it unlikely that the ancient Greeks were widely engaging in similar practices, there may have been some instances where farmers were able to benefit from the fighting that took place above their fields.[97]

Refugees, Escapees, and Exiles

A successful siege effort could affect population levels in a region without resorting to mass executions. In some situations, the native population were forced into exile, while colonists were brought in to replace them, as occurred in the case of Potidaea, discussed below. The Persians, meanwhile, were notorious for transplanting defeated peoples, as the people of Eretria discovered when they found themselves exiled to distant Susa in 490.[98] Enslavement was another common fate following a siege, and newly enslaved peoples might have been forced to accompany their masters abroad.[99] Others, meanwhile, may have been forced to migrate following the destruction of their city at the hands of invaders, as we find in the cases of Plataea and Thebes.[100] Notably however, these populations, or their descendants, often returned to re-found these destroyed cities, as highlighted by Pausanias—an important topic explored further in Chapter Five.[101]

Population shifts were not all consequences of death or defeat, however, and could also be a consequence of individuals seeking refuge in safer areas.[102] In some cases, friendly city-states seem to have been willing to take in refugees, particularly when they shared a common enemy.[103] Such was the case for Athens during the Persian invasion of 480, in which the Athenian people were hosted by Troizen and Salamis as Athens met with destruction.[104] The Athenians themselves took in refugees from Plataea during the Spartan siege of 431, which allowed a small garrison of Plataeans to defend their city without fear of their families being captured or killed.[105] In addition to these official evacuations, there must also have been many unofficial border crossings by refugees, as these areas were not always patrolled or fortified.[106] Taking refuge in mountain retreats seems to have been another option for those seeking to avoid conflict, as raiders rarely ventured into such easily defensible territory.[107] It was not just the free population that fled the *chora* in the face of invasion, but also the enslaved individuals who were forced to work in the mines, quarries, and fields of the countryside. As war engulfed the state,

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[96] Pollard 2021, 105-7; Turner 2015. Both Pollard and Turner suggest that the bones were removed from the battlefield by farmers before being ground down and used as fertiliser elsewhere, however.
[97] Hughes (2013, 131) likewise considers the idea.
[98] Hdt. 6.119.
[99] See Xen. *Hell.* 2.1.18; Hdt. 3.39, 6.100-101; Diod. Sic. 12.72.9-10; 12.80.5. 13.61.4-6 for some of the many examples.
[100] Thuc. 3.68; Plut. *Vit. Alex.* 11.
[101] Paus. 4.27.9-11.
[102] Hanson 1998, 112-115; Hughes 2013, 172.
[103] See Plut. *Vit. Alex. 13* for an additional, though later, example of Theban refugees being accepted into Athens.
[104] Hdt. 8.41: Garland 2017, 55, 62, 67.
[105] Thuc. 2.72; Diod. Sic. 12.42.2.
[106] Fachard and Harris 2021, 20.
[107] Diod. Sic. 14.57.3-6; Paus. 10.17.4.

some enslaved individuals took advantage of the chaos to make their escape. Invading forces often facilitated these escapees, perhaps seeking allies, or perhaps knowing that their loss would hurt the future productivity of the invaded city-state. Thus, during the Peloponnesian War, Thucydides reports 20,000 enslaved individuals were able to flee from the Attic countryside as a consequence of the Spartan occupation of Decelea.[108] The Spartans themselves remained very wary of their enslaved helots, who significantly outnumbered their captors, in case they chose, or were aided, to revolt again.[109] The Athenians, attempting to exploit this situation, developed a number of fortified bases (*epiteichismos*) around the Peloponnese during their amphibious raiding efforts.[110] While supporting ravaging activities, these garrisoned bases also facilitated the escape of helots and other enslaved individuals in the surrounding area.[111] Ultimately, the loss of enslaved workers appears to have been one of the most significant impacts to productivity caused by warfare and would have been noticed long after the fighting had concluded, as will be explored in the case of Athens in Chapter Four.

Supplying the Athenian Besiegers at Potidaea (432-430/429)

The Siege of Potidaea serves as an interesting case study through which we can explore the food requirements of a besieging army, and where these resources were likely to have been sourced from during the lengthy siege. Located on the westernmost peninsula of the Chalcidice, Potidaea was a relatively minor city-state at the time of the siege, though it formed part of the Athenian-led Delian league. Having incurred the ire of Athens due to a supposed breach of their owed tributes to the league, Potidaea found itself subjected to an invasion by Athens and her allies.[112] Before battle broke out, Perdiccas II, then king of Macedonia, invited the inhabitants of the Chalcidice's coastal cities to abandon their present homes and band together at the better protected inland city of Olynthus. This practice, referred to as a *Synoecism*, transformed Olynthus into a much greater city than existed previously, with population estimates of around 30,000 at this time.[113] Those who accepted the offer to migrate were reportedly offered land near Lake Bolbe to make use of, which was located much further inland than Olynthus (see Figure 4) and was likely to have been much more sheltered from the consequences of the coming conflict. How many of the Potidaeans took up this offer remains unknown, though enough of the population remained to mount a siege defence. Following their defeat in a battle

[108] Thuc. 7.27. This figure has been the source of much contention. Hornblower (2008, 591) notes that many economic historians see it as valid, and seems to somewhat agree. Mussche (1998, 63) is far more skeptical, placing the number of escaped individuals from the mines at a few hundred at most. Osborne (1995, 28) notes the figure as problematic, but does not provide an estimate. Regardless of the actual number, I argue we can assume this to mean a significant proportion of the enslaved workforce at the mines was lost.
[109] Plut. *Vit. Ages*. 32: Thuc. 1.101, 132, 4.41. The Messenians had previously revolted in 464, during the Third Messenian War, which culminated in the siege of Mount Ithome. This was not a situation that the Spartans would have wanted to reoccur, particularly not while simultaneously engaged with the Athenians.
[110] Thuc. 5.56; Diod. Sic. 13.64: Hanson 1998, 28-30; Thorne 2001, 239-240.
[111] Thuc. 5.14: Thorne 2001, 239-240.
[112] Thuc. 1.60-4: Lendon 2010, 97-99.
[113] Thuc. 1.58; Diod. Sic. 12.34.2: Hornblower 1991, 102.

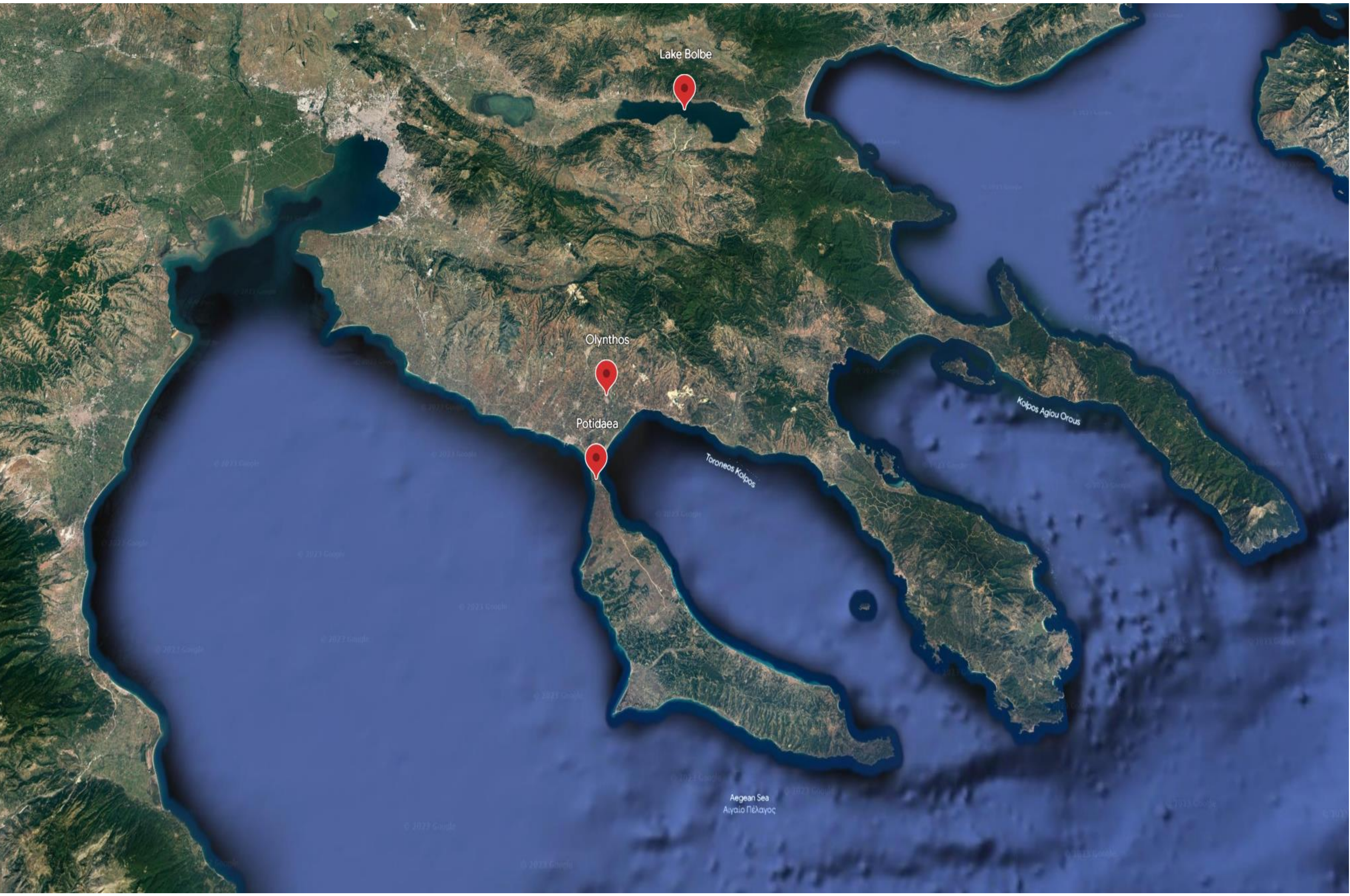

Figure 4: Map of the Chalcidice region with mentioned areas labelled.

just outside the city walls, the Potidaeans were placed under a siege which would last two and a half years, tie up almost a third of the Athenian military might, and cost the besiegers as much as 2000 talents, before the exhausted and starving defenders finally capitulated.[114] That the Athenians were able, and willing, to spare the resources and manpower to maintain their encirclement for this period, a feat which few city-states are likely to have been able to replicate, highlights the perceived importance to the Athenians of maintaining their hegemony.[115] This case study was chosen as it highlights the logistical dilemma of a siege, as both besieger and besieged struggled to locate enough food to keep their troops in the fight.

Thucydides provides a plausible count of the Athenian hoplites involved both in the initial battle and siege, and as additional waves of reinforcements were sent to support the siege.[116] Initially 1000 troops were sent to the area, and these were quickly reinforced with another 2000 when conflict appeared likely.[117] These 3000 troops served as the initial besieging force, but were joined by another 1600 hoplites under Phormio to assist with siege construction around the city.[118] This additional force did not remain at Potidaea for the entire duration of the siege, but instead campaigned around the region. In 430 the Athenians, perhaps fed up with the length of the siege, sent 4000 additional hoplites under Hagnon to build siege weapons and make an attempt on the city.[119] This force failed to capture the city, and ended up being recalled as many of the troops had been infected with the plague that was devastating Athens at the time.[120] Over the course of the thirty-month siege, the Athenians appear to have kept around three thousand troops deployed to the siege site itself on average, though as Hornblower notes, there were likely to have been fluctuations as reinforcements arrived, or when troops were withdrawn.[121] This figure should probably be taken as a minimum of the total force for two reasons, however. The first is the possibility that the allied force that supported the Athenians earlier in the battle outside the walls remained to assist the hoplites with the siege, and the second is the possibility that the Athenian hoplites were joined by a number of servants, who would assist them with their armour, and could even join the fight if the situation became dire enough.[122] With an allied force and servants, the size of the Athenians and their allies could be far greater than the three thousand hoplites mentioned by Thucydides. I have included these possibilities in my calculations (see Table 1), but because Thucydides is silent regarding these points, I will treat the minimum figure as my baseline.

[114] Thuc. 2.70; 3.17.
[115] Lendon 2010, 147-9: Kagan 1987, 278.
[116] Diod. Sic. 12.46.2. See Thuc. 1.60-4, 2.58, 3.17 for all of Thucydides' recorded shifts in troop number over the course of the siege.
[117] Thuc. 1.61.
[118] Thuc. 1.64.
[119] Thuc. 2.58; Diod. Sic. 12.46.2.
[120] Thuc. 2.58.
[121] Hornblower 1991, 402.
[122] See Thuc. 1.61 and Kagan 1987, 283 for discussion on the allied force accompanying the Athenians; See Thuc. 3.17 on the topic of servants. Their pay was said to be halved, though whether this holds for their food rations is not made clear. See also Foxhall and Forbes (1982, 55) for further discussion on this point.

Occupation Type	Average Troop Count	Monthly Ration Requirement		Total Ration Requirement	
		Choenix	*Medimnoi*	*Choenix*	*Medimnoi*
Athenian Hoplites Only	3000	91250	2401	2737500	72039
With Matching Allied force (MAF) only	6000	182500	4803	5475000	144079
With MAF and Servants (half rations)	9000	228125	6003	6843750	180099
With MAF and Servants (full rations)	9000	273750	7204	8212500	216118
With Servants only (Half Rations)	6000	136875	3602	4106250	108059
With Servants only (Full Rations)	6000	182500	4803	5475000	144079

Table 1: Approximate ration requirements for the Athenian besieging army over the course of the siege of Potidaea.

To calculate the rations required by the Athenian fighters and their (possible) allies, I draw upon the work of Foxhall and Forbes. They have estimated that the standard Greek soldier's ration across the period would need to have been at least one *choenix* of wheat (approximately 840g) per day in order to meet their calorie needs.[123] These were then converted to *medimnoi*, at a 1:38 ratio following Stroud.[124] Per month, 3000 hoplites would require roughly 2400 *medimnoi* of wheat to remain sufficiently fed, Over the approximately thirty months of the siege of Potidaea, this figure would have grown to a massive 72000 *medimnoi.* Were the Athenians to have had a fully matched allied force and a single servant for each hoplite, this figure could have been as high as 180000 *medimnoi,* if the servants were on half rations, or just over 216000 *medimnoi* if at the full ration rate. The minimum figure of 72000 *medimnoi* would convert to around 2160 tons of grain (1 *medimnoi* = roughly 30kg). If all of this food had to be imported, a minimum of 25 full shiploads of wheat was needed to support the troops at Potidaea over the 2.5 years of the siege.[125] The Athenians were well accustomed to importing grain however, and this figure pales in comparison to the estimated 910,000 *medimnoi* Bresson estimates were imported into Athens each year.[126] Plato's reference to Socrates' and Alcibiades' experience of the siege suggests that the Athenians were not always able to provide the necessary rations, as the two figures are presented as at times struggling to hold out in winter conditions and being forced to skip meals.[127] The figures presented must therefore be taken as approximations.

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[123] Foxhall and Forbes 1982, 73.
[124] See Stroud 1993, 55 for the source of the *Medimnoi* measures. Note that the Greek *Medimnoi* varied somewhat between wheat (~27kg) and barley (~31.5kg) measures.
[125] Bresson (2015, 86) suggests the average transport ship had a carrying capacity of 50-90 metric tons at the time.
[126] Bresson 2015, 411.
[127] Pl. *Sym*. 220a-e.

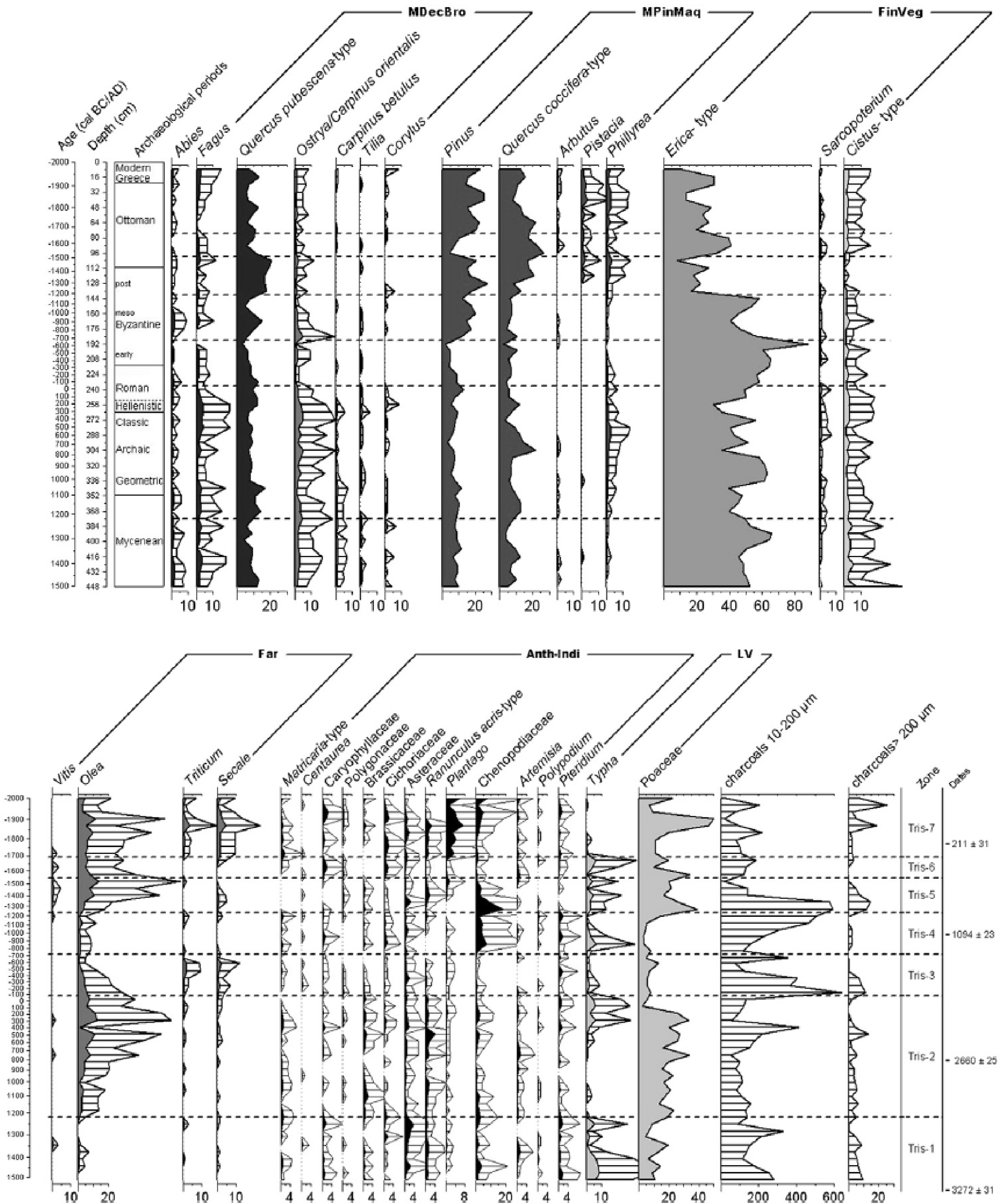

Figure 5: Palynological Data for the Chaldice Region. It is the period designated Classic here that is of interest. The sharp decline in the Olea (olive) at 400 BCE on the second chart may highlight the halted production due to the Athenian siege. (From Panajiotidis & Papadopoulou 2016, 141).

Supplying the besieging army from existing sources would have placed the local environment under a lot of stress, even if we only consider the food requirements of the Athenian hoplites. Because besieging forces preferred to live off the produce of the land that they were occupying, ravaging was almost certainly undertaken in the area surrounding Potidaea, though the topography of the region was likely to have limited the operational area of foraging parties. Thucydides mentions that the force of 1600 hoplites under Phormio campaigned around the area, and these troops were likely involved in gathering supplies from the region.[128] This force seems to have principally travelled by ship, so it is unlikely the Athenians were willing to venture too far inland during these foraging expeditions. In their examination of pollen samples drawn from Tristinika marsh in the Chalcidice, near Potidaea, we find a significant drop in farming indicators around the period of the siege (see Figure 5).[129] While pollen samples are not accurate enough to state for certain that this correlated with the *Synoecism* of Olynthus and the Athenian siege, the coincidence is notable. This rapid decline may have been a result of Athenian ravaging which caused a halt to local production for the thirty-month period of occupation, combined with the inland movement of those peoples who abandoned their coastal cities.[130] As more of the surrounding lands were ravaged, the available foodstuffs would have become harder and harder to find, and this is supported by the claim of Plato above. The Athenians were thus almost certainly reliant on outside supplies of food, whether originating in Attica or imported from other markets. Diodorus reports Hagnon bringing an "abundance of grain" for the Athenian army during his attempt to take the city.[131] Thanks to the city's coastal position, and proximity to the Black Sea grain markets, the importation of foodstuffs would have posed few logistical issues, beyond the financial cost, and the Potidaeans were very likely to have been carrying out the practice themselves in times of shortfall before the war. Having to pay for this imported food itself plus the cost of transport ships and crew, alongside hoplite wages and the other operating costs of the siege does help to explain the staggering 2000 talent expenditure by the Athenians for just this theatre.[132] While Potidaea was a cause of many problems for the Athenians, who appear to have been more than happy to accept the Potidaeans' surrender after two long years, the siege must have been far worse for the besieged. It is impossible to substantiate the claims of starvation and cannibalism as food supplies ran out, but the siege would undoubtedly have been a miserable experience regardless, and one which we are told even women and children were forced to endure.[133] Following their surrender to the Athenians, the Potidaeans who managed to survive the siege were ordered to leave their lands with only a few garments each in exchange for their safety and freedom.[134] The land was then given over to 1000 Athenian colonists, according to Diodorus, who presumably

[128] Thuc. 1.65.
[129] Panajiotidis & Papadopoulou 2016, 141.
[130] Thuc. 1.58.
[131] Diod. Sic. 12.46.2.
[132] Thuc. 3.17.
[133] Thuc. 2.70.
[134] Thuc. 2.70.

installed themselves within what remained of the defeated populace's former homes.[135] The pollen reports suggest that the region did eventually become productive once again, though it is unclear whether this was due to the work of the new Athenian colonists, or the Potidaeans who were able to return to their original lands in the aftermath of the Peloponnesian War.[136]

[135] Diod. Sic. 12.46.7; Thuc. 2.70: Zelnick-Abramovitz (2014, 330) questions the notion of entire populations being expelled and replaced by colonists, suggesting it was likely only a subset of the population, perhaps the wealthiest, who were expelled.
[136] Panajiotidis & Papadopoulou 2016, 141.

Chapter Two: The Impact on Productive Landscapes, Resources, and Industries of the *Chora*

The Greek *chorai* were home to more than just agricultural spaces, and the range of forest, mountain, and riverine environments that occupied the landscape similarly offered productive opportunities and resources that might be exploited by human populations. These productive landscapes were the source of a variety of natural resources, including game animals, timber, and firewood, drinking water, and minerals. While some areas, such as the *eschatia,* offered productive opportunities without the need for much in the way of artificial construction, few areas of the *chora* were wholly free from human shaping or intervention. As will be highlighted throughout this chapter, the forests, rivers, mountains, and other areas of the *chora* were modified by humans both during peacetime and conflict, though each of these approaches could have vastly different environmental impacts. The resources produced in these spaces, alongside the output of the agricultural environments examined previously, served as the basis for a number of industries that operated from within the *chora*. A great deal of infrastructure was developed to support these industries, though this also served as a target for raiders. When these raiders damaged these vital links in the chain of production, extensive disruptions to the productivity of these areas could arise as a consequence.

The *Eschatia* and Marginal Lands

In Greek *ta eschatia (ἐσχατιά)* translates to something like the furthest part, but appears to have been used to refer to those areas beyond the margins of human cultivation.[137] These areas were often located close to the mountains or sea, and were typically unsuitable for cultivation.[138] As Endsjø notes, the *eschatia* thus constituted something of a liminal space, acting as a border between the civilised world and the wilderness beyond.[139] These marginal areas were not unproductive however, and Greek individuals found ways to benefit from the variety of productive opportunities these spaces offered. Constantakopoulou convincingly argues that these spaces served as hunting grounds for farmers looking to supplement their food supplies.[140] The *eschatiai* were unlikely to have been the typical hunting grounds for boars or other large game, which tended to be found in less populated areas such as mountains, forests, and uninhabited islands, but rather smaller game such as birds and hares.[141] Though fictional constructs, Alciphron's *Letters of Farmers* provides some insight into the practicalities of bird hunting in the ancient world.[142] While Alciphron was likely to have been writing much later than the

[137] Endsjø 2000, 358-9; Constantakopoulou 2018, 5.
[138] Constantakopoulou 2018, 5.
[139] Endsjø 2000, 359.
[140] Constantakopoulou 2018, 6.
[141] Fox 1996, 124-6.
[142] Alciphron, 2.27.

Classical Greek period, a market selling captured birds had already been established in Athens by the fifth century.[143] In the same passage Alciphron mentions a wild pear in the area, suggesting that fruit might likewise have been gathered from these spaces.[144] These marginal grounds likely also served as grazing grounds for domesticated animals, a source of wild herbs, and the area from which domesticated bees gathered the nectar and pollen to be transformed into the honey gathered by farmers.[145] The productive opportunities that were found in the *eschatia* relied upon relatively little in the way of infrastructure, and would thus have been less susceptible to ravaging. Because of this, I suggest these areas could have been incredibly important in the aftermath of a siege if they were able to yield a source of food in a time where the population was often starving.

Forested Environments

Alongside the artificially selected trees filling the orchards of the *chora,* the countryside was home to forested areas filled with a range of fauna and flora. By the fifth century BCE, it seems that forests had been mostly cleared from those areas of the countryside that could support cultivation, and were primarily to be found within unworkable mountainous regions.[146] A range of wild tree species appear in the pollen records for Ancient Greece, including pines, cypress, oaks and firs, alongside many others.[147] Forests serve a multitude of important natural functions, such as providing food and shelter for fauna, managing water levels, and enriching soil, which all supported the wellbeing of the local environment. While the Greeks did exploit forested areas for timber, firewood, and the fauna that dwelled within, they also played a role in managing these spaces, whether through the intentional creation of sacred groves or through the careful and sustainable management of local forests.

Forests served as the principal source of timber and firewood for both local populations and invading armies. In peacetime, Grove and Rackham suggest that the communities that benefitted from the resources offered by nearby forests often worked in cooperation to ensure that these forests were used in a sustainable manner.[148] In his *Politics*, Aristotle mentions that some city-states employed forest wardens, suggesting that the city-state likewise played an active role in overseeing the use of these areas.[149] Invading armies were less likely to have shared such concerns, and could undermine the conservative efforts of these communities by stripping forests entirely to fulfill their own military needs.[150] Besieging armies in particular required a great deal of timber for their military constructions,

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[143] Wycherley 1957, 197.
[144] Alciphron, 2.27.
[145] Plato (*Critias* 111b-d) suggested cleared forests supported nothing but bees. See also Constantakopoulou 2018, 5 and Forbes 1996, 76, 90.
[146] [Xen.] *Ath. Pol*. 2. 12: Bresson 2015, 38, 73; Meiggs 1982, 40.
[147] Meiggs 1982, 44-47.
[148] Foxhall 2020, 1-2; Grove and Rackham 2001, 184–187.
[149] Arist. *Pol*. 1321b; 1331b.
[150] See Thuc. 2.75 for example. Also see Lev Yadun, Lucas, and Weinstein-Evron (2010, 782-4) who attempted to quantify the amount of wood required by a besieging army. Though they use the Roman siege of Masada as their basis, many of their conclusions are likely to have been applicable to other ancient sieges.

as was demonstrated by the Spartans' felling of huge numbers of trees around Plataea to construct the massive mole, encircling walls, and other defences required to besiege the city.[151] The scrub on the forest floor, being easily accessible, would likewise have been stripped and gathered up by foraging bands to use as fuel, depriving the local populace of this important resource. Charcoal makers would likely have felt the impact of this loss, as scrub wood seems to have been favoured for this purpose.[152] Ancient armies were also considered a source of careless or intentional burning, which could cause serious damage to forests in Greece's dry environment.[153]

Sacred groves also occupied the *chorai* of the Greek world and were formed from clusters of wild trees often attached to shrines or temples devoted to the Greek deities. These groves were often connected with sanctuaries, and being the property of the gods, were considered consecrated ground.[154] Because of this sacred nature, or perhaps rather because of the legal punishments attached to transgressions, the local population seems to have avoided felling the trees or hunting the animals contained within, instead gathering resources from elsewhere even if more distant.[155] However, for those with no fear of local laws or divine retribution, sacred groves could function as a vital source of timber, fuel, or even offer strategic opportunities. Though occurring much later than the period examined in this thesis, the army of Sulla stripped the sacred groves around Athens to support his siege weaponry while laying siege to the city in 87-86.[156] Cleomenes the Spartan meanwhile is reported to have both cut trees from the sacred grove at Eleusis, and in a separate instance burned down a grove sacred to Argus in which 5000 of his Argive opponents had taken shelter, utilising the natural environment to his strategic advantage.[157] The concept of *asylia* will be further explored in Chapter Three, though it is important to note that this breach of the sacred space's inviolability saw Cleomenes condemned within the literature, and few commanders appear to have been willing to follow his example.[158]

There is an ongoing debate concerning whether the activities of ancient Greeks and Romans ultimately led to deforestation in their environments over the centuries.[159] Plato's *Critias* is often cited as an example, as the philosopher discusses the deforestation around Attica, and the resulting environmental consequences.[160] Other evidence can be seen in the way that particular species of trees, especially those prized for specialised military uses (such as Silver fir and Cypress) became harder to find and access as

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[151] Thuc. 2.75.
[152] Dem. 42.7: Foxhall, 1996, 53-54: Kellogg 2013, 123.
[153] Lucr. 5.1241; Paus. 3.4.1; Thuc. 2.77 references forest fires when discussing the conflagration caused by the burning of the mound at Plataea.
[154] Bowe 2010, 237-39.
[155] Meiggs 1982, 378; Hughes 2005, 38; Bowe 2010, 238.
[156] Plut. *Vit. Sull.* 12.1.
[157] Hdt. 6.75, 79.
[158] Paus. 2.20.7; Hdt. 6.79.
[159] Perhaps the two most vociferous opponents are Hughes (2005, 39-42; 2011, 45-55) arguing for deforestation, and Rackham (1996, 28-29) with the opposing view. Thommen (2009, 41) and Meiggs (1982, 378) both cover the issue yet do not explicitly fall on either side of the debate.
[160] Pl. *Criti.* 110c-112a.

the period progressed.[161] Even if we were to agree that deforestation was an issue in the period, invasive warfare, while a contributor, does not seem to have been one of the principal causes. The ongoing demand for wood in charcoal production, shipbuilding, construction, and as a basic source of fuel, almost certainly contributed more to deforestation than sporadic invasions and sieges would have. Ultimately, the damage caused to forested areas through invasive warfare was likely limited to specific areas around invasion paths, military camps, and besieged strongholds. Provided they were free from further interference, damaged forests should have been able to naturally restore themselves over time. If humans or livestock (particularly goats) were to impede this process however, through over-felling, artificial clearing, or overgrazing, for example, new growth could be impacted and as a result a forest might be reduced in size or even lost entirely.[162]

Water Sources and Riverine Environments

Having access to clean drinking water was a pressing need for any ancient army, and there are reports of ancient armies having to surrender within a day in situations where water was unavailable.[163] Furthermore, the dry climate of much of Greece meant that rain could not be relied upon, particularly in summer which sees very little rain.[164] Pausanias describes events during the siege of Phana, in which a single woman was reportedly able to sustain the besieged force by stealthily drawing water from a spring outside the city without being noticed by the besieging forces.[165] This woman continued until an oracle alerted the confused besiegers to the woman's actions and they were finally able to destroy the spring and force their enemy's hasty capitulation. While the accuracy of the situation presented is questionable, it may have served as an exemplary tale for besiegers, reminding them of the importance of cutting off all available water sources, however minor. Fortifications that incorporated protected reservoirs, such as the regional fortress of Monte Turcisi in Sicily, would thus have provided a more difficult target, as they could safely supply the garrison even through a lengthy siege.[166]

Beyond physically blocking access to fresh water, ancient armies also carried out the intentional contamination of wells and other water sources. This strategy was employed by several ancient peoples, particularly in the dry environments of the Near East.[167] Among the Greeks, Solon's use of the plant hellebore during the sixth century siege of Cirrha is probably the most widely attested in the literature.[168] While there is no direct evidence that this tactic was applied during the Peloponnesian War, Thucydides reports that the Athenians initially attributed the illnesses caused by the plague of 430 to the Spartans'

[161] Theophr. *Hist. Pl.*5.7.1: Hughes 2013, 133; Thommen 2009, 40-1; McNeill 2004, 396.
[162] Wertime 1983, 446; Meiggs 1982, 376.
[163] Diod. Sic. 14.105.1-2; Plut. *Mor.* 232a.
[164] Hughes 2005, 5; Meiggs 1982, 39.
[165] Paus. 10.18.2.
[166] Jonasch & Winterstein 2021, 18. Many cities also seem to have had reservoirs and wells both for everyday use and in case of siege, as recognised by Aristotle (*Pol.* 1330b).
[167] Del Giacco *et al.* 2017, 1491-2.
[168] Paus. 10.37.5-8; Polyaenus, *Strat.* 6.13: Del Giacco *et al.* 2017, 1491-2.

poisoning of their cisterns, highlighting that this was a known tactic at the time.[169] This contamination of water sources could also be undertaken by city-states preparing for an invasion of their own territory. Fouling the wells of the countryside was one of the methods listed to prepare the state for siege in Aeneas Tacticus' manual on siege defence.[170] This tactic was only really effective in situations where the population were reliant on a limited number of sources of potable water, which is why it could be so effective during sieges. Ultimately, the environmental impact of contamination by poisoning would only last a brief period, as the poisons available to ancient armies would become diluted relatively quickly.[171]

Maintaining access to outside water sources could pose alternate risks for strongholds, as these could create weak points able to be exploited by clever strategists during a siege. Perhaps the most effective example of this comes from the Spartan siege of Mantinea (385), where the Spartans were able to dam the river that usually flowed through the city.[172] The accumulated water was then unleashed against the walls, tearing through the brick wall, and even damaging houses inside the city, resulting in the Mantineans' rapid capitulation.[173] This weak point of the Mantineans was already known to the Spartans, and had been tested under Agis in the 418/7 Battle of Mantinea, when the same river was diverted to flood an area not far from the city, damaging the fields, and thereby goading the enemy soldiers to battle.[174] Similar tactics were reportedly used by the Persian army under King Cyrus in 539 against the Babylonians, and by Cimon in the 470s against the Persians.[175] In later periods, where aqueducts were more common, these water channels could also be used as a means of entry into the city, as exploited by the Aetolians against the city of Hegira during the third-century Social War.[176] Large-scale aqueducts were not common in Greece during the Classical period, though underground pipes (presumably too small to crawl through) were used to carry water into at least some cities.[177] During their siege of Syracuse, the Athenians reportedly disrupted this flow of water into the city by damaging these underground pipes, though we do not hear of the Syracusans suffering from a lack of water despite this loss, suggesting that they remained able to source water from elsewhere.[178]

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[169] Thuc. 2.48.
[170] Aen. Tact. 8.3-5. This forms part of a suite of early scorched-earth tactics advocated by the former commander.
[171] Contamination by other means, such as dumping bodies into wells would have been more problematic, rendering the well unusable until the body could be removed and the well-drained. It should be noted that while this tactic has been attested to in other historical periods (see Barras and Greub 2014, 498, 500) and could have easily been carried out by ancient Greek armies, we find no mention of it in the contemporary sources.
[172] Xen. *Hell*. 5.2.4; Diod. Sic. 15.12.1-2.
[173] Paus. 8.8.7-8.
[174] Thuc. 5.65.
[175] Hdt. 1.189-191; Paus. 8.8.7-8.
[176] Polyb. 4.57.8.
[177] Tolle-Kastenbein 1994; Thommen 2009, 57. Samos does seem to have been able to construct a 2km long aqueduct in the sixth century, though this seems to have been an exceptional development for the time.
[178] Thuc. 6.100.

There appears to have been little use made of damming and channelling by the Greeks of the Classical period, whether in peacetime or in wartime.[179] The obstructing of the nearby river at the Siege of Mantinea, referenced earlier, is the principal example of damming, though in this instance the course of the river was unlikely to have been noticeably affected beyond the immediate term.[180] Himilco's filling up of the river running alongside Acragas, in order to allow siege engines to reach the city's walls, may have had a greater impact on the course of the river, though this is hard to measure.[181] Two of the largest-scale siege projects of the Classical period serve as exceptions in this area, however. The first is the large mole built over a lagoon to reach Motya by the Sicilian besiegers. This mole was constructed to replace a causeway sacrificed by the defenders to keep the aggressors from reaching their island.[182] An even more notable example occurred during Alexander the Great's 332 Siege of Tyre, where a mole was built to connect the island of Tyre to the mainland in order to aid siege operations.[183] This colossal engineering project required enormous amounts of manpower and material but resulted in a permanent change to the landscape. While Tyre was originally an island, the mole caused a further build-up of material over the centuries, to the point where today Tyre is connected to the mainland. These examples were unusual, however, as this was an area of little focus in the Classical period, requiring levels of labour and engineering prowess greater than most city-states in the period had the capability to employ.

Marine Environments and the Naval Element of the Siege

Marine environments are rarely considered in examinations of the siege, and though the sea ultimately saw little long-term environmental consequence from blockades or shipwrecks, I think it important to include in order to build a more complete picture of the siege. The integral element of ancient siege warfare, which was isolating the besieged site, was often much more difficult when the stronghold was located on the coast or able to maintain protected sea access. For numerous city-states, the sea was central to many aspects of everyday life, providing access to food sources, either through imports or fishing, as well as an easier and often more efficient means of travel, trade, and communication with other peoples. Thus, until a naval blockade could be enforced, many cities could not be effectively isolated through encircling the land alone. In both the extended invasions of Athens during the early Peloponnesian War and the 415-13 siege of Syracuse, the besieging forces were not able to achieve naval superiority.[184] In these situations, progressing the siege became more difficult as the besieged populace retained the ability to import supplies, maintain communication with their allies, and make

[179] Diod. Sic. 13.47.3-5 provides one example of such construction, in the form of a causeway bridging Euboea to the mainland. Many Near Eastern states, such as Persia, were much more proficient in this area, especially in war (Hdt. 1.162; 1.191).
[180] Xen. *Hell*. 5.2.4.
[181] Diod. Sic. 13.85.3.
[182] Diod. *Sic*. 14.48.1-3.
[183] Plut. *Vit. Alex*. 24-5: Curt. 4.2-3.
[184] Thuc. 1.81.

strategic military strikes despite their main stronghold being (mostly) isolated on the landward sides.[185] There do seem to have been a few methods of modifying the marine environment tested by the Greeks in order to hinder or capsize enemy ships, though the evidence suggests they were not that effective. For example, the defenders at Tyre are reported to have manoeuvred large boulders in the waters around their island city, seemingly in an effort to hinder the navy of Alexander, though their impact was reportedly underwhelming.[186] There is also mention of the Syracusans blocking their harbour by chaining moored boats together to block the Athenian navy, and employing stakes in the shallows to hinder coastal landings, though these methods were unable to stand up to a concerted assault.[187] Notably, these innovations seems to have been employed by defending forces to strengthen their defences, rather than a means through which a besieging force could trap the defenders inside their harbours. Despite these attempts the difficulties involved in modifying marine environments meant that the best method of denying sea access to a besieged city was simply for the besiegers to deploy a stronger navy.

Because Greek ships were powered via the wind, or human power (especially in the case of warships), the impact of naval warfare upon marine environments would have been minimal, as these energy sources result in no waste in the environment beyond any litter thrown overboard by the crews. Furthermore, because there was no real capacity for a Greek army of the period to block a site from the sea via means of engineering, such as large-scale earth or water moving projects, as soon as the blockading ships had physically departed, access to the sea and its resources would be immediately restored. Overfishing seems not to have been a major issue in this period, though local aquatic species might have appreciated the slight reprieve as sea access was blocked for local fishermen.[188] Similarly, predatory and scavenging sea life likely benefited in the immediate aftermath of a naval engagement, as soldiers and marines fell overboard in the fighting, though this too is hard to measure.[189] Shipwrecks may have had some impact on local marine environments, as obstacles for other ships and perhaps refuges for marine life, though Carlson suggests that the lack of heavy equipment aboard warships made them less likely to sink to the ocean floor.[190] Unless the conditions for preservation aligned perfectly however, these shipwrecks would break down over time, much to the disappointment of modern archaeologists, and very few examples have been uncovered.[191] Where fighting was closer to the shore, as often occurred around sieges, there was a greater chance of bodies and wrecks washing ashore, which

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[185] Thuc. 1.142, 2.79, 3.16. This has been an issue for besieging armies throughout history. See Diod. Sic. 20.96.1-3, 98.1-3 for a comparable situation at Rhodes in 304/3. We might also consider the crusader siege of Acre, where the naval connection played a significant role. See Asbridge 2010, 403, 411, 414-15 for this latter example.
[186] English 2009, 42. See also Diod. Sic. 13.78.4.
[187] Thuc. 6.75.
[188] Thommen 2009, 52-3; Hughes 2005, 39. Hughes does suggest that overfishing and scarcity did become an issue in the Mediterranean in later Roman times, however.
[189] Perhaps a whalefall might be an apt comparison. When a whale carcass falls to the sea floor it provided a great boost to the food supply on the ocean floor. Further research is needed, but the mass of bodies following a naval battle could in theory yield an even greater mass of food energy. See Smith and Baco 2003, 311-312.
[190] Carlson 2013, 394.
[191] Carlson 2013, 379-82.

likely offered booty free for the taking.[192] Ultimately however, the impact of siege warfare upon marine environments seems to have been fairly minimal, with little in the way of consequence for marine habitats or the productivity of marine environments.

Mines and Quarries

Mines and quarries are another example of humans shaping the environment to their needs. The placement of these sites was determined by the presence of minerals, which often appeared in rocky or mountainous areas. A great deal of development was required to facilitate the mining and quarrying process, as well as the transporting of the unearthed goods. The dangerous work and dreary conditions involved in extracting the ore, stone, and marble meant that much of this labour was forced upon enslaved peoples.[193] The silver mines at Laurion in Attica are perhaps the best understood example of an ancient Greek mine, and excavations have highlighted the significant developments undertaken around Laurion to facilitate mining operations.[194] In addition to the mine shafts themselves, a great deal of construction was undertaken to facilitate the extraction of ore from the mines, as well as processing this extracted material, with workshops, washeries, cisterns, and furnaces all found in the area.[195] These developments were not unique to Laurion, and Kakavoyiannis has identified similar infrastructure at a mining area near Maroneia, in Thrace, for example.[196] There were other structures discovered in the Laurion region, though these might be unique to Attica. These are a number of fortified structures that appear to have been designed to house, oversee, and even contain the enslaved population who worked said mines. Osborne highlights the presence of strong towers as uncharacteristic for the Attic countryside, suggesting that this region in particular had a heightened desire for security and protection as a result of the large, enslaved population.[197]

Quarries likewise required a great deal of infrastructure. The highest quality sources of marble and stone were often located away from urban centres, presenting logistical challenges to the builders of the grand temples and fortresses that required them. For less grandiose constructions that didn't require the highest quality blocks or high-end carving, it was far more efficient for city-states to gather the necessary resources through small-scale quarrying locally, a practice which is attested archaeologically throughout the Greek world. [198] Where possible, river or sea transport was the simplest means of getting the blocks to their destination, with animal or human-powered transport typically being much less

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[192] See Thuc 7.74 and Diod. Sic. 13.19.1 for an example the Syracusans made off with the abandoned Athenian ships following the failed siege. There does not seem to have been any laws concerning the ownership of shipwrecks at this time, as we find occurring in other historical periods with the *wreccum maris,* or law of wreck.
[193] See Thuc. 7.87 for the fate of the Athenian prisoners in the Syracusan quarries. The enslaved Athenian miners were probably treated better than this, though Osborne (1995, 31) notes that no miners appear on the slave manumission lists, which perhaps indicates that few survived the ordeal.
[194] Camp 2001, 140. Lohmann 2005, 105, 110.
[195] Camp 2001, 140.
[196] Kakavoyianis 2005, 338; Liefferinge 2018, 539-540.
[197] Osborne 1987, 77-79.
[198] Russell (2017, 93) details many of the recent projects in this area.

efficient, particularly when the distance was great. The transporting of heavy blocks of stone or marble presented an arduous task, and a range of lifting devices, loading platforms, and paved roads were developed to facilitate this process.[199] Animal power was often utilised to lift and carry the heavy blocks within the quarry itself, so barns and food storage were kept on site.[200]

It is unclear to what degree these areas were specifically targeted during siege situations or even smaller scale raiding. Thucydides reports that Spartan ravaging bands had reached the Laurion region "where the Athenian silver mines are" early in the Peloponnesian War but does not mention whether any damage was inflicted to the mines or supporting infrastructure, nor whether this affected mining activities.[201] Thucydides references Laurion being threatened for a second time during a speech in which Alcibiades is trying to convince the Spartans to occupy Decelea.[202] Here Alcibiades suggests that the occupation of Attica will deprive the Athenians of their "revenues from the silver mines at [Laurion]."[203] This passage seems to be describing in advance the actual effects of the occupation, though once again it is unclear whether the mining area was directly targeted. What seems more likely is that the occupation facilitated the escape of much of the enslaved workforce, which would have impacted the running of the mines, even if the infrastructure itself remained undamaged.[204] Mussche suggests that it was only 370s that the mines restarted operations in any serious capacity.[205] Quarries are never specifically mentioned as being targeted in the historical sources. They probably served as unlikely targets, as they were often out of the way, contained little in the way of moveable wealth (raiders were unlikely to carry off a marble block after all), and their destruction was unlikely to have resulted in the same psychological impact upon the besieged as other areas of the *chora*. We do find a famous example of a quarry benefitting from a siege, in the case of the quarry near Syracuse which gained an influx of enslaved workers in the form of Athenian prisoners. This likely boosted the output of the quarry, though it is reported many prisoners were eventually moved to other parts of the city-state.[206]

Processing Sites

As we saw in the case of the mines and quarries above, the occupants of the *chora* were not limited to growing or extracting raw materials from the local environment, but often played a role in transforming these materials into the intermediary or end products used throughout the city-state.[207] Common examples of this type of processing equipment include olive and wine presses, used for extracting olive

[199] Wurch-Kozelj 1988, 56-58.
[200] Wurch-Kozelj 1988, 56-57, 61; Bessac & Müth 2020, 30.
[201] Thuc. 2.55; Hornblower 1991, 430-31.
[202] Thuc. 6.91.
[203] Thuc. 6.91.
[204] Thuc. 7.27.
[205] Mussche 1998, 63-4.
[206] Thuc. 7.87; Diod. 13.19.4. see also Hornblower 2008, 743.
[207] Osborne 1987, 13.

oil and grape juice respectively, as well as kilns for firing pottery.[208] Though the *chora* was responsible for much of the productive output of the city-state, the cities of the Greek world were not simply consumers reliant on the output of the *chora*, as was suggested by the "consumer city" model which few today subscribe to.[209] Urban production instead specialised in different industries and goods, in areas including metallurgy, textiles, and luxury goods, such as perfume and the fine-ware ceramics seen in modern museums.[210] The city thereby benefited from the *chora*'s capacity to produce and process the grain, olive oil, wine, firewood, timber, and other everyday materials required by city inhabitants. The gathering and processing of these goods primarily stemmed from producers living on extra-urban sites with easy access to the required resources. This is obvious in the case of Laurion, where ore processing was performed near the mine itself, and we find similar proximity with charcoal huts sited near forests for example. Much of the processing of agricultural output took place in or around the farmhouses or farming estates examined in the last chapter. These farm estates could also facilitate artisanal crafting, as with pottery and weaving, though we also find processing facilities like kilns attached to sanctuaries and in the suburbs of the cities. Of course, not all households could afford to install their own kiln or olive press, and they often appear to have been either communal investments or could be rented from those with the means to install them. Even physically distant or isolated households may have been able to participate via what Foxhall terms the "village beyond the village."[211] This is the idea that pockets of individual households, though too small or separated to be labelled a village in the traditional sense, still operated in an analogous manner to one. These communities shared processing sites, traded goods amongst one another, and collectively managed their local resources.[212]

The treatment of these processing sites during raids or invasions goes frustratingly unmentioned in the contemporary accounts. While Hanson devotes significant attention to the destruction of grain fields, olive tree and farmhouses, this area finds little consideration in his work. Foxhall meanwhile views this aspect of the economy as more significant, and suggests that the olive presses, threshing floors, and kilns scattered across the landscape would be particularly susceptible to damage by invading forces.[213] If we assume this was the case, it nevertheless remains unclear whether raiding parties deliberately sought out this infrastructure for destruction, or whether these processing sites were coincidentally damaged in the course of other ravaging activities. If farmhouses or grain fields were already being targeted for looting and destruction, then nearby processing sites were almost certainly subjected to a similar fate. It is unclear whether the loss of an olive press would have the same psychological impact

[208] See Chapter 6 of Foxhall 2007 for an extensive examination into olive processing in the ancient world. See pages 132, 162 for discussion of wine processing in the same work. Also see Silvestrelli (2016, 133-135) and Foxhall (2020, 3, 5, 8) for discussion of ceramic production and the presence of kilns in the Greek *chora*i.
[209] Finley 1973, 125; Vlassopoulos 2007, 124-6.
[210] Bresson 2015, 193.
[211] Foxhall 2020, 3.
[212] Foxhall 2020, 3; Halstead 2014, 208-10.
[213] Foxhall 1993, 138. See also Krentz 2007, 172 and Chaniotis 2011, 127-28.

to a besieged individual compared to the loss of an olive tree or cow, despite all being means of wealth generation. As will be explored further in Chapter Four, damage to this infrastructure, whether specifically targeted or otherwise, would have resulted in a noticeable decline in the productivity of affected communities and industries until the processing infrastructure could be restored.

Chapter Three: The Impact on the Military and Cultural Landscape

In this final chapter of Section One, I examine two additional areas of the Greek landscape. The first area relates to fortifications and other military constructions, while the second area relates to sanctuaries and religious spaces. The development of the sites examined in this chapter were typically the result of long-term public projects. There are exceptions, such as the fortified farm towers of the fourth century, but the development of large-scale military or religious constructions, such as forts or temple complexes, was well beyond the means and authority of almost all individuals. While I have elected to separate the military and religious spaces of the *chora* from those areas examined in previous chapters, such distinctions were unlikely to have been shared by the ancient Greeks, and these areas frequently overlapped in reality. Thus, we find fortified towers and temples to Demeter sited in agricultural areas, and shrines placed atop mountains or in forests, to name just a few examples. Ultimately, these distinctions were made for the sake of convenience and readability, and the reader should understand that these areas could be highly interwoven in the minds of Greek individuals. To conclude the chapter, I explore the case study of the Athenian siege of Syracuse, which took place across 415-413. In this siege, military construction played a pivotal role, as both the Athenian and Syracusan forces wrestled to control the area around the city. I explore how effectively, or ineffectively in this instance, the Athenians were able to ravage the surrounding landscape of Syracuse, before turning to examine the reactions of the Syracusans following the siege, particularly in the area of military development. This will introduce a number of the ideas that will be explored in more detail in Section Two of the thesis.

Fortifications and Military Construction

Fortifications were standard across the Greek world, and almost all of the city-states, with the notable exception of Sparta, walled off their principal city.[1] Invasions were a frequent occurrence in the Classical Greek world, though a sturdy wall and a garrison offered the defending force an overwhelming military advantage, and could prevent all but the most ambitious assault.[2] For example, during the Third Messenian War in the 460s, a force of Helots rebelled from Sparta, taking refuge upon, and fortifying, Mount Ithome.[3] Thucydides reports that the Helots were able to hold out for as long as ten years, as the Spartans lacked the skills in siege craft needed to overwhelm the defending force.[4] In both the sieges of

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[1] Paus. *Mor. Ages.* 29, 55*, Agis.* 6. The Spartans seem to have envisioned walls as “womanly” or weak, trusting in their warriors instead.

[2] When the Athenians tried to assault Potidaea, they found little success despite their numerical advantage (Thuc. 2.58). The Spartans similarly wasted much effort failing to capture the fortified Oenoe from the Athenians, allowing the Athenians time to prepare for invasion (Thuc. 2.18). Campbell 2006, 30.

[3] Thuc. 1.101; Diodorus Siculus, 11.63, 4-64,1.

[4] Thuc. 1.103. The reported ten-year length of the siege is debated in the scholarship with Finley (1972, 95 n.20) vehemently rejecting the notion, suggesting alongside others that the length was mis-recorded. McNeal (1970, 325) on the other hand, following a lengthy study of this specific issue, ultimately accepts Thucydides’ ten years. Regardless of whether we accept the ten-year siege or a shorter period, the very fact that the Helots were able to resist the famed Spartan army for so long speaks to the advantage fortifications could offer.

Plataea and Potidaea, small garrisons were likewise able to hold out against much larger armies for years before finally being worn down.[5] Walls were very rarely breached by Greek armies before the development of siege artillery in the fourth century BCE, and besieging forces often turned to deceptive tactics to overcome the defenders, such as sneaking into the stronghold or inciting betrayal from within.[6] If the walls themselves could not be undermined, then perhaps the morale of the sheltering people might have proved more susceptible. Challenged by the Periclean strategy of the Athenians, for example, the Spartans responded with a mix of psychological and economic warfare to try and coax the Athenians out from behind their city walls.[7] This took the form of the ravaging of agricultural lands explored over the previous chapters, forcing the defenders to choose between losing their property or risking their safety in battle. Where alternative methods failed, encirclement served as a proven method of capturing strongholds, though it relied upon starving out the besieged, and had the tendency to drag on for months or even years.[8] In response to new threats, whether that be widespread ravaging, new forms of siege weaponry, or more professional armies, city-states often found themselves required to continually adapt or update their military strategy and planning in order to maintain a defensive advantage.[9]

The military environment was probably the area of the countryside that saw the most innovation and change over the course of the Classical period, and the military landscape of 435 differed greatly from that of 350, for example. The defence of the *chora* appears to have been a much greater consideration in fourth century constructions, which I suggest in the next chapter was a response to individuals' experiences of sieges in the Peloponnesian War. It is in this period that we begin to find *Geländemauer*-style fortifications constructed around Greek cities. These were more extensive wall circuits that incorporated more of the surrounding countryside within the enwalled area than a traditional circuit allowed.[10] During invasions, this additional protected space facilitated the continuation of agricultural activities within the city walls, thereby allowing a besieged city to maintain some level of food production. This additional space would also have allowed an invaded populace to take refuge more comfortably within the city, rather than being packed in, as occurred in other situations.[11] There were other strategic considerations at play too, as *Geländemauer* could be built in a way that incorporated important terrain into the stronghold, such as elevated areas or approaches to the city, ensuring that these areas were not able to be exploited by besieging forces.[12] Notable examples of fourth century

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[5] Thuc. 1.65; 2.78.
[6] See Diod. Sic. 13.66.1-2; Hdt. 6.100-1; Xen. *Hell.* 1.3.14, 5.3.9 for examples of besieged cities being betrayed by those inside. See also Aeneas Tacticus' military handbook which provides several examples of these tactics and seeks to inform the reader about methods to prevent them. Marsden 1969, 65-7, 99-100 discusses the introduction of Artillery into the Greek world.
[7] Thuc. 1.142, 2.16, 2.21.
[8] (Campbell 2006, 33-5).
[9] For examples of these constructions see Campbell 2006, 54-55: Müth 2021, 21: Beste 2016, 194; Jonasch and Winterstein 2021, 11.
[10] Müth 2021, 22-3.
[11] See Thuc. 2.48-54; Plut. *Vit. Eum.* 11; Ar. *Ach.* 72. for examples of the cramped conditions during sieges.
[12] Pederson 2010, 8.

Geländemauer include the rebuilt Messene and Halikarnassos in Asia Minor.[13] The massive wall built over Epipolae in Syracuse, following the siege of the city by the Athenians, also embodies this type of construction, as will be seen in the case study later in the chapter. While not strictly a *Geländemauer*, this new fortification allowed a much greater area of farmland around Syracuse to be protected.[14]

While the principal city usually had the most impressive defences, a range of other sites in the countryside were fortified. In the fifth century, fortifications appear to have been constructed highly selectively, and were thus limited to securing particularly critical areas of the *chora*. Despite occupying the wealthiest city-state at the outset of the Peloponnesian War, the Athenians had only fortified a few of its key military approaches, such as Oenoe, the temple complex at Eleusis, the silver mining region of Laurion, the port at Piraeus, and the city itself by 431.[15] During the war, the Athenians managed to fortify a few additional areas, such as Sounion and Rhamnous in 412 and Thorikos in 411, though this seems to have resulted in the city-state being forced to cut expenditure elsewhere.[16] The Dema Wall, built to protect the approach into Athens nearest to Corinth and Boeotia's Kithairon frontier, may have similarly been constructed in this period, though Munn argues an early fourth century date is more likely.[17] Many other states followed Athens' lead, and the Greek countryside saw a great deal of investment in regional fortification, particularly over the fourth century. Individual fortified settlements were established to protect specific communities by serving as secure refuges in time of conflict. though in combination they could also form an overlapping defensive network that stretched across the countryside, as Fachard demonstrated in the case of the Eretriad (see Figure 6).[18] The fortress at Monte Turcisi serves as an example of one of the state-of-the-art fortresses constructed in the Sicilian countryside. This military outpost could support a large garrison and operate as an independent base from which military operations could be launched during times of invasion.[19] Features such as large cisterns for storing drinking water and anti-artillery defences demonstrate that it was designed to be capable of withstanding both a concentrated attack, as well as a drawn-out encirclement.[20]

Fortified towers likewise became a ubiquitous feature of the military landscape in the fourth century and have been discovered across the breadth of the Greek world. Much like with the Oracle of the Dead controversy outlined in the introduction, the role that specific towers played in the landscape is often open to dispute.[21] Maher & Mowat, and Caraher, Pettegrew, and James have convincingly argued that

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[13] See Pederson 2010 for discussion of the wall of Halikarnassos and Müth 2021 on the fortifications of Messene.
[14] Diod. Sic. 14.18.1-3.
[15] Thuc. 2.18: Camp 2001, 128.
[16] Thuc. 8.4; Xen. *Hell*.1.2.1: Camp 2001, 129.
[17] Munn 1993, 37-38
[18] Fachard 2016, 212-14, 225; Munn 1993, 25-27.
[19] Jonasch & Winterstein 2021, 11.
[20] Jonasch & Winterstein 2021, 16, 18.
[21] There are many discussions on these points. See Caraher, Pettegrew & James (2010 408), Fachard (2016. 214, 220), Maher & Mowat (2018, 453) Morris & Papadopoulos 2005, 189–190 for examples.

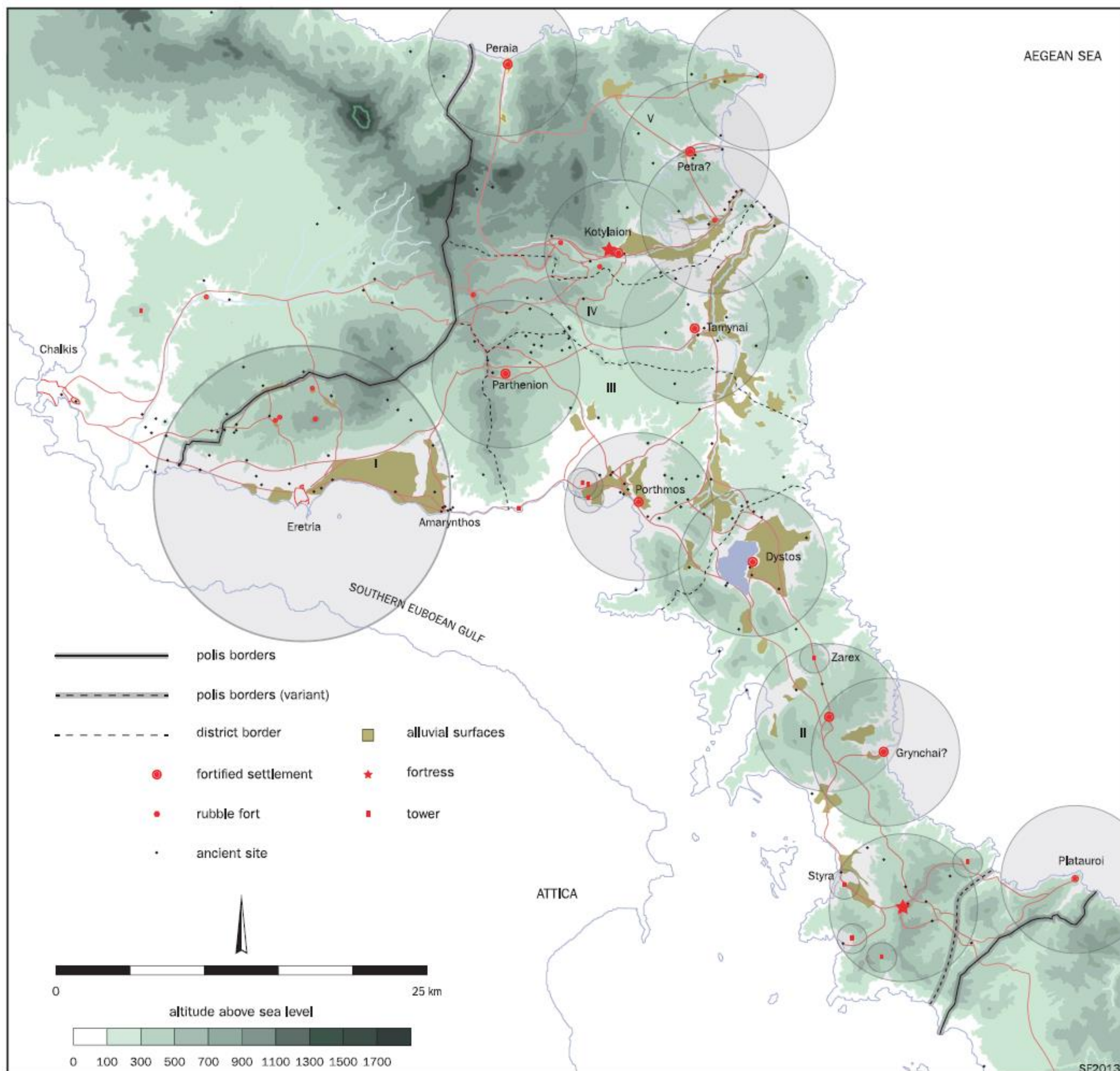

Figure 6: The Fortifications of the Eretriad. The circles demonstrate the overlapping defensive perimeters that covered much of the landscape (From Fachard 2016, 225)

the towers found in Mantinea and Corinth respectively formed part of each city-state's defensive strategy for example.[22] Ober's views feature in more detail in Chapter Four, though he identified numerous regional signal towers and border forts that he believed contributed to a wider Athenian regional defensive strategy following their defeat in the Peloponnesian War.[23] Where many of the towers originally believed to have military uses were found to be strategically sited with good viewing angles, there are also a number of towers found in low-lying plains that did not meet this criteria. The scholarship has come to recognise that these were likely to have been personal fortifications. These fortifications were attached to farming estates and provided the owner a secure space to store goods and

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[22] Maher & Mowat, 2018; Caraher, Pettegrew & James 2010, 408-9.
[23] Ober 1985, 3, see pages 130-180 for a discussion of the specific towers involved in this defensive system.

better protection against external threats.[24] These farm towers may also have been used to contain enslaved workers so they could not escape, as already discussed in the context of the mines at Laurion.[25] Young was the first to propose a method to classify the role of individual towers based on their location.[26] Using this methodology, towers located near harbours should be classified as lighthouses while towers on high vantages or along roads formed part of defensive networks, and those towers sited on less defensible terrain in agricultural areas were classified as personal farm towers. Such classification methods have done little to settle the ongoing debates, and a return to the more nuanced, though time-consuming, approach (where each tower is individually classified based on context) might remain best practice.[27] The relative simplicity of constructing towers meant that they were widely adopted by both public strategists and private individuals to fulfil a range of needs. particularly once the importance of defending vast regional landscapes was realised.

The cost in manpower, resources, and wealth to build effective fortifications could be staggering, While there are many unknowns in quantifying the costs involved, previous estimates suggest it could have cost as much as 300-500 talents for the more extensive circuits of the Greek world, such as the rebuilding of the Long Walls in Athens during the fourth century – an amount comparable to the cost of constructing and decorating a major temple.[28] The huge monetary costs were due to the needs for massive amounts of materials and manpower for these projects. Through a series of experiments, Bessac and Müth estimated that 507,355 person-days would be required to complete construction of the 7.7km *Geländemauer* wall circuit at Messene in the mid-fourth century for example.[29] Even for regional fortifications, which were typically much less extensive than those above, the costs would still have been significant, and likely not always easy to justify in times of peace. The funding for the construction and maintenance of these public fortifications seems to have initially been drawn from state funds. Using Athens as an example, much of the city-state's fortifications were funded by tribute from members of the Delian league.[30] During the course of the Peloponnesian war, Athens introduced a number of new taxes to raise funds, including harbor taxes (the *pentekoste* and the *ellimenion)*, war taxes (the *eisphora)*, and poll taxes (*dedekate*), among many others.[31] Donations served as another source of valuable funds for military construction, whether in the case of liturgies, or from other regional

[24] Dem. 47.56: McHugh 2017, 71-3; Hanson 1998, 74-5; Foxhall 2007, 34, 43.
[25] Osborne 1987, 13.
[26] Young 1956, 55-59. More recent attempts to classify regional fortifications can be found in Fachard 2016, 215 and Blomley 2022, 21-23.
[27] Blomley 2022, 20; Fachard 2016, 215.
[28] Bessac & Müth 2020, 33: Tréziny 2001, 373–374: Typaldou-Fakiris 2004, 302–303.
[29] Bessac & Müth 2020, 32. An interesting comparison can be found in Seth Bernard's estimation of the labour required to build the fourth century Servian Walls of Rome. To complete the 11 km circuit, Bernard arrives at a figure of almost 7,000,000 person-days, though this includes the time needed to shape and transport the construction materials. For just the construction of the ashlar walls, Bernard's estimates 800,000 person-days would have been required, which falls within the realm of Bessac and Muth's figure for Messene.
[30] Thuc. 1.96, 99: Pritchard 2015, 52.
[31] Gabrielson 2013, 375-6; Pritchard 2015, 53, 55.

states such as Persia.[32] Fundraising via taxes was by no means unique to Athens, and would have been vital in funding such expensive undertakings across the Greek world.[33] Every investment in fortification was money that could have been used elsewhere, however, so there was likely to have been an ongoing struggle for both individuals and city-states when deciding how much was necessary to spend on security, versus investing in other areas.[34]

If an invading force made it past their enemy's defences and into their countryside, they too shaped the local environment to meet their own needs, which typically aligned with advancing their military objectives. The invaders, who were rarely seeking to occupy the land for the long-term, were unlikely to have shared the local's concerns for maintaining the sustainability of the surrounding environment, nor would they have worried about disrupting the existing order of the space.[35] Security was a key concern for forces encroaching into foreign territories, so military camps were typically established along invasion routes and in areas of military operations for the protection of the troops.[36] These camps were primarily timber constructs, which facilitated hasty construction and allowed the camps to be more easily shifted if required. The downside of timber constructions was their susceptibility to being burnt down by retaliating forces, however, as happened at Delium and Syracuse for example.[37] Though rarely undertaken, the construction of more permanent bases was an option available to occupying armies, as the Spartans demonstrated at Decelea.[38] The fortress constructed at Decelea was by no means a temporary camp, but a well-fortified stone structure that remained present in the Attic Landscape for decades, if not longer, after the war had concluded.[39] Similarly, Pausanias refers to a site near Nestane in Arcadia that was still known in the second century CE as the 'ruins of Philip's camp' after Philip II of Macedon and his army had encamped there five centuries earlier.[40] These examples highlight that these constructions did not disappear once the soldiers left, but became new features in the local landscape.[41] In some instances these vestiges served as a boon, and a fortress could be repurposed by

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[32] Xen. *Hell*. 4.8.9-11; Lys. 21.1–5: Gabrielson 2013, 381; Pritchard 2015, 51.
[33] Gabrielson 2013, 373, 375-6. 137-144; Isager & Skydsgaard 1992, 137-144.
[34] This is of course an ongoing problem for public decision makers and may have best been expressed by Dwight Eisenhower ("*The Chance for Peace"* Address, Delivered Before the American Society of Newspaper Editors, 4/16/53) in a modern context. "Every gun that is made, every warship launched, every rocket fired signifies, in the final sense, a theft from those who hunger and are not fed, those who are cold and are not clothed. This world in arms is not spending money alone. It is spending the sweat of its laborers, the genius of its scientists, the hopes of its children. The cost of one modern heavy bomber is this: a modern brick school in more than 30 cities. It is two electric power plants, each serving a town of 60,000 population. It is two fine, fully equipped hospitals. It is some 50 miles of concrete highway. We pay for a single fighter plane with a half million bushels of wheat. We pay for a single destroyer with new homes that could have housed more than 8,000 people."
[35] Foxhall 2020, 15-19; Halstead 2014, 209-10; Forbes 2007, 187.
[36] Thuc. 2.19, 3.2; Diod. Sic. 13.72.8-9, 14.62.3-5.
[37] Thuc. 4.100: Plut. *Vit. Nic.* 16-18. Though not strictly a built camp, Thuc. 6.101 highlights that the materials used to construct them could certainly be burned.
[38] Thuc. 7.27.
[39] The site believed to correspond with the ancient fortress was excavated in the 1870s by T Vassos and 1890s by L. Munter. See McCredie 1966, 57; Ober 1985, 141-2.
[40] Paus. 8.7.4. Philip II was encamped at the site in 338.
[41] Tilley 1994, 15.

its new occupants.[42] In other instances, as will be explored with Syracuse below, this would instead mean that a lot of clearing work had to be undertaken by farmers whose lands had been covered in a series of siege walls..

Once a siege site had been reached and camps erected, work could begin on the encirclement of the stronghold. The purpose of encirclement was to block the entry of supplies into the city, while simultaneously limiting the freedom of movement of the besieged, which would ideally allow the besiegers more freedom to act in the occupied territory. In situations where a besieging army was unable to contain the opposing force, ravaging became a much more dangerous proposition, as will be demonstrated in the case of Syracuse below. The layout of the circumvallation walls, ditches and embankments required for encirclement was subject to the terrain at hand and required a great deal of logistics and planning to ensure that no enemies were able to slip through. Thus, while some sieges merely required a circuit to be erected around the city, as at Melos or Plataea, other sites needed multiple areas to be fortified, as with Potidaea, which was located on an isthmus.[43] In cases where besieged cities had protected access to the sea, a naval blockade was required, as the Spartans found during the siege of Athens in 405/4.[44] In addition to the encircling walls, supporting towers and forts were also constructed around the besieged city to provide increased security in case of counterattack.[45]

Some sieges involved the use of more specialised siege equipment, weapons, and constructions, and these were typically built on site, thereby removing the difficulty of transporting what were often large and unwieldy devices across Greece's mountainous terrain.[46] There does seem to be a tendency to overemphasise the importance of ancient siege weaponry in both the ancient literature, and perhaps consequently, modern scholarship.[47] I argue instead the greatest strength of siege weapons was their psychological impact, as these imposing machines were able to instil dread in a besieged populace, even if their destructive capabilities proved quite limited on the battlefield.[48] This is not to say that they offered no contribution, but rather that other developments, such as the expansion of professional armies, were a greater factor in effective siege assaults.[49] Nor did the development of early artillery and other siege equipment result in significant changes to the way that invading armies interacted with the landscape beyond the siege site itself. As with other forms of siege construction, gaining access to necessary materials from the surrounding landscape served as the critical factor for besiegers. More

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[42] See the case of Eleutherai in Fachard et al. 2021, 528 for an example of a fortress changing hands between the Athenians and the Boeotians.
[43] Thuc. 2.64, 75, 6.100-102.
[44] Plut. *Vit. Lys.* 13-15: Xen. *Hell*. 2.2.4-10.
[45] Thuc. 3.20, 6.97, 6.101; Diod. Sic. 13.7.3-6, 14.51, 63.1.
[46] Demetrius Poliorcetes was well known for his siege constructions. His massive siege towers were built on site. see Diod. Sic. 20.48, 95.1-3. See also Vitr. *De Arch.* 10.16.1: Nossov 2005, 31.
[47] Levithan 2013, 3-4.
[48] The Siege of Rhodes (305-304) again serves as a good case study. Even with his massive siege towers, Demetrius "The Besieger", was unable to make much headway against a stout defence. Diod. Sic. 20.91-100.
[49] Levithan 2013, 4.

advanced types of siege equipment, such as catapults and mobile siege towers, were not typically used by Greek armies before the fourth century, but even the basic rams and ladders available to fifth-century forces would have required access to a source of timber.[50] Specialised siege constructions, such as the moles built by the Spartans at Plataea and Alexander's forces at Tyre, drew heavily upon local timber sources in their construction.[51] As noted earlier, materials might be gathered from wherever they could be found, which at times resulted in nearby dwellings and infrastructure being torn down and having their materials repurposed. Military necessity and efficiency was the priority for besieging forces, and siege engineers seem to have had few qualms about placing these constructions atop existing fields or suburbs.

Extra-Urban Sanctuaries

Sanctuaries were frequently encountered as one moved through the Greek landscape and these sites played a host of important roles within ancient Greek society. Sanctuaries served as the principal point of connection to the pantheon, who were worshipped through altars where offerings could be made to these deities in the hope of receiving their blessing in return.[52] Extra-urban sanctuaries had long occupied the Greek countryside, and many even predated the establishment of the city-states.[53] De Polignac and Osborne suggest that these sanctuaries played an integral role in uniting communities in the Geometric and Archaic periods, forming a type of proto-city-state.[54] As the city-state eventually developed into the form that we recognise in the Classical period, the importance of sanctuaries did not diminish, and they continued to play an important role in political administration, as well as in binding communities together by propagating shared traditions, rituals, and folklore.[55] Because of their connection to the gods, sanctuaries were involved in a range of rituals and festivals, and participation in these events could attract visitors from the local area, from across the city-state, or in the case of the Panhellenic sanctuaries, even from across the breadth of the Greek world.[56] Sanctuaries were also responsible for managing and displaying a host of artefacts and treasures donated to the gods.[57] Following a successful battle or athletic victory, for example, an individual or community might

[50] Vitr. *De Arch.* 10.16.1; Campbell 2006, 41; Nossov 2005, 31-2.
[51] Thuc. 2.75: Plut. *Vit. Alex*. 24-5: Curt. 4.2-3.
[52] De Polignac 1995, 33; Ferguson 1989, 29-31.
[53] De Polignac 1995, 12-13; Osborne 1994, 148; Morgan 1994,106-7.
[54] De Polignac 1995, 78-81; Osborne 1994, 159-160. For a later example of how this union could be formed see Williamson (2021, 331, 337, 349) who examines the connection between the Hellenic sanctuary of Zeus and the Indigenous population at Panamara in Caria in the second century.
[55] De Polignac 1995, 32; Osborne 1994, 145-46; Shear 2021, 5, 23-25.
[56] Paga 2016, 322; Nielsen 2014, 178-180 notes that Panhellenic was not a term used to describe sanctuaries such as Olympia by the Greeks, though they did state that any Greek individual was welcome to participate. These sites were not directly associated with any intentional efforts to politically unify the Greeks, and thus Nielsen suggest that scholars should be mindful about their use of the term Panhellenic in this instance.
[57] Arafat 2009, 580-583.

dedicate a monument or a share of the spoils to the gods, to thank them for their aid. We thus find a host of treasures at these sites, including tripods, arms and armour, and even a warship.[58]

For a site to be considered a sanctuary, it required an altar.[59] These altars could take many forms, often determined by the type of deity worshipped at the site, but served as the space from which offerings could be left.[60] Sanctuaries also required a boundary to be marked, distinguishing the sacred space from the rest of the landscape.[61] This boundary could take the form of a physical barrier like a wall, or simply be marked with boundary stones (*horoi*).[62] Temples were not strictly required for a site to constitute a sanctuary, though they were common, and could serve a number of purposes, whether housing the altar, displaying a statue of the deity, or serving as a treasury. Much of the monumental architecture associated with sanctuaries today stems from the late sixth and fifth centuries BCE, though less grandiose versions appeared much earlier.[63] Particular sanctuaries might also contain a range of other features, such as wells, springs, caves, sacred groves, ritual baths, or even racecourses, which usually boasted some connection with the divinity worshipped at the space in the folklore.[64] Sanctuaries have been found situated in a range of different areas of the Greek landscape, whether in the plains, in caves, atop mountains, or in the heart of the city. One consideration in the placement of a sanctuary seems to have been related to matching the terrain with the deity to be venerated there.[65] Thus shrines devoted to Demeter (the goddess associated with agriculture) were often founded in cultivated areas near sources of water.[66] Shrines found in floodplains, meanwhile, tended to be devoted to Poseidon or Artemis, who had associations with underground water and dampness respectively.[67] De Polignac suggests that the initial placement of extra-urban sanctuaries revolved around marking frontiers or border spaces.[68] He argues that sanctuaries thus acted as both a political marker of territory, as well as a more symbolic marker demarcating the divine and human worlds.[69] Carter is not wholly convinced by De Polignac's emphasis on borders, however, and citing the case of Metaponto, argues that shrines could also be established in the midst of densely occupied territory to serve the needs of existing communities, much like a parish church today.[70] Sanctuaries would have been frequently encountered as one moved through

[58] Diod. Sic. 34.5-6; Plut. *Vit. Nic.* 28; Thuc. 2.13.5; Paus 10.18.5: De Polignac 1995, 46.
[59] Paga 2016, 322; Ferguson 1989, 31.
[60] Ferguson 1989, 29-31.
[61] Paga 2016, 322; Ferguson 1989, 29-31.
[62] Paga 2016, 322.
[63] See Paga 2016, 327, 329 for dates on the earlier and later temples at Eleusis and Sounion. See Ferguson (1989, 55, 60) for the temples of Olympia and Isthmia.
[64] Ferguson 1989, 31, 55, 58, 61.
[65] Jost 1994, 217-8.
[66] Cole 1994, 204-5; Jost 1994, 220.
[67] Jost 1994, 219-220. Jost notes that these divisions were not always so clear cut, and the polyvalence of the Greek deities meant that each god could have multiple different associations in different contexts.
[68] De Polignac 1995, 34.
[69] De Polignac 1995, 36-37.
[70] Carter 1994, 177, 181.

the ancient Greek landscape, regardless of whether one was in the marginal lands, in a highly cultivated area, or in an urban environment.

During times of siege, the populace could be cut off from these extra-urban sanctuaries. Not being able to participate in important rituals, such as the initiation ceremony for girls (the *Arkteia*) at Artemis' sanctuary in Brauron, or the harvest festivals, must have served to remind the populace of the disruptive effect that the siege was having on their lives.[71] Athletes likewise would not have been able to escape the city to participate in the games during that time, nor could processions, where participants marched between the *chora* and the city, such as the *Panathenaea* and the procession to Eleusis, take place as usual. This seems to have acted as a dampener of morale within Athens while the countryside was occupied by Sparta. Following the occupation of Decelea, the Athenians were unable to carry out their traditional march to celebrate the mysteries at their sanctuary in Eleusis but were instead reduced to sending a smaller procession by sea.[72] In 408, Alcibiades, upon his return to the city, is reported to have led the Athenians out of the city in a show of force, where they marched to Eleusis as per tradition, greatly boosting morale within the city despite the continued Spartan occupation of the countryside.[73] There were typically sanctuaries found within the city walls, so a besieged people were unlikely to have been wholly cut off from their gods, and many rituals could have continued to be carried out, though perhaps without the excess seen in peacetime.[74]

Another role of sanctuaries was as a place of protection. The right of safe conduct, or a*sylia*, is most commonly associated with sacred spaces, such as sanctuaries, which were deemed to hold permanent inviolability.[75] As Lintott demonstrates, the Greeks recognised another type of *asylia*, not associated with shrines, that could be granted by communities to favoured groups and individuals outside of that community as a reward for services rendered.[76] This *asylia* ostensibly spared the benefactors from attack or reprisal from members of the community that extended the asylia, though it is unclear how effective this protection was in reality, particularly in times of conflict.[77] While this second form of *asylia* could be granted to ordinary individuals, the former was typically only extended to very specific individuals, such as envoys, who were recognised as falling under the temporary protection of the gods while on business abroad, or to supplicants through a process known as *hiketeia*, where the supplicant would enter a sanctuary and physically sit at the altar, requesting divine protection.[78] In the latter case it appears to have fallen to the priests to accept responsibility for such an individual, and, if accepted,

[71] Paga 2016, 320.
[72] Plut. *Vit. Alc*. 34.
[73] Plut. *Vit. Alc*. 34.
[74] Plutarch (*Vit. Alc.* 34) mentions that the Athenians were undertaking the rite of Plynteria the day Alcibiades arrived in Athens for example.
[75] Sinn 1993, 72; Billows 2008, 310; Rigsby 1996, 30-32. *Asylia* translates literally as "freedom from being plundered".
[76] Lintott 2004, 351.
[77] Lintott 2004, 351.
[78] Sinn 1993, 72.

the supplicant came under the sanctuary's protection.[79] Sinn suggests that many individuals could have been living under this protection at the same time, and a host of infrastructure grew around particular sanctuaries to support this supplicant population.[80] However, if an individual physically left the sanctuary, whether out of free will, physical coercion, or because they were tricked, the *asylia* of the sanctuary no longer applied to the individual, and they could be punished or killed without incurring divine retribution.[81] The idea of a Panhellenic 'sacred law' regarding *asylia* is mentioned in the contemporary literature and the concept is generally accepted by modern scholars.[82] As Hall notes however, the sacredness of those under *asylia* seems to have been more "fluid, rather than static", meaning that this was not an ultimate guarantee of safety. Hence most ancient references to the practice occurred where *asylia* was breached.[83] Following the fall of a city, supplication could serve as the vulnerable population's only avenue of escape from the slaughter or enslavement that might follow. During the successful capture of Motya in 398/7, Dionysius I reportedly sent criers into the city to spread the word that the inhabitants should head to the temples for protection from his out-of-control army.[84] Likewise, at the fall of Selinus in 409, the women and children taking refuge in the temples were reportedly spared while the rest of the population was slaughtered by the Carthaginian besiegers.[85] The supplicants in the city of Himera were not treated so leniently by the same Carthaginians, however, and were instead dragged away from the altars and enslaved.[86] How *asylia* functioned in extra-urban sanctuaries in wartime is less well known. One of the few examples we have relates to Cleomenes, the Spartan king mentioned in the last chapter, who earned a great deal of infamy for his reported burning of a sacred grove in which Argive soldiers were taking refuge. Ultimately, we do not know whether these places continued to operate as normal and serve as refuges for existing supplicants, nor do we know whether sanctuaries played a role in supporting rural populations fleeing their homes during an invasion, though this would serve as a valuable area for future study.

Despite their ubiquity in the landscape, we find relatively few instances of sanctuaries subjected to ravaging in times of siege.[87] Krentz suggests that sanctuaries served as desirable camp sites for armies on the move, as they usually possessed space to camp, as well as accessible sources of wood and water.[88] Despite hosting armies, the sacred sites appear to have been protected from ravaging, seemingly less because of fortifications or guards, but rather because of their *asylia*. The best example of a sanctuary being negatively impacted by a Greek army during the Peloponnesian War is the Athenian seizure of

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[79] Sinn 1993, 73.
[80] Sinn 1993, 75-6.
[81] Sinn 1993, 74-5.
[82] Diod. Sic. 13.57; Xen. *Ages*. 11.1–2: Billows 2008, 310; Ober 1996, 56; Hall 2018, 194.
[83] See Thuc. 4.81; Xen. *Hell.* 6.5.7-9.
[84] Diod. Sic. 14.53: Hall 2018, 198.
[85] Diod. Sic. 13.57.3-4. Diodorus notes that the Carthaginians only spared these supplicants so that they did not set themselves and the temple alight, destroying the booty within.
[86] Diod. Sic. 13.62.4.
[87] Miles, 2014, 120. Pritchett 1991, 160–168.
[88] Krentz 2007, 163.

the sanctuary of Apollo at Delium in 424. It is unclear whether the Athenian occupation, and subsequent fortification, of the Boeotian extra-urban sanctuary, was simply opportunistic, or planned from the outset.[89] The Athenians justified their actions *post facto* by claiming the captured site rightfully became Athenian under Hellenic Law.[90] The temple and surroundings were left damaged as the Athenian army worked to turn the temple into a stronghold, which involved constructing a palisade, digging a ditch, and erecting watchtowers. They were also accused of quartering in the sanctuary, dismantling nearby houses for building materials, ripping up nearby grapevines to use as filler material, and helping themselves to the sanctuaries' sacred water.[91] I suggest that this was a case where an encamping army overstepped their bounds, rather than a case of outright ravaging, and notably we do not find mention of the Athenians looting any sacred treasures during this occupation. If enrichment were the principal goal of ravaging during sieges of the Peloponnesian War, we would expect to find many more sanctuaries looted for the wealth they contained. The capture of another sanctuary dedicated to Apollo at Delphi during the Third Sacred War in the 350s was quite different, however. The Phocians, under Philomelos, captured and looted the sanctuary, taking the treasures donated to the site for themselves.[92] Miles suggests this action, alongside the plundering of sanctuaries by Dionysius I of Syracuse in the early fourth century, invited the idea of targeting of religious sites to Greek armies, which occurred much more frequently in the following centuries.[93] Such actions were heavily condemned in the ancient literature, and acts of blasphemy on temple grounds were often viewed as causes of misfortune and disaster.[94]

The outright destruction of sanctuaries and temples seems to have been limited to cases where the invading force was not Greek. The Carthaginian disregard for the Sicilian temples was clear during their late-fourth century campaigning across Sicily, in which numerous sacred spaces were looted or destroyed as cities were sacked.[95] The other major instance where sanctuaries were destroyed occurred during the Persian army's invasion of the Greek mainland in 480. The Sanctuaries at Brauron, Eleusis, and Sounion, alongside many others, were damaged as the Persians advanced upon Athens and this is attested in the archaeological record.[96] Following this destruction, which outraged the Greeks, Herodotus reports that those who united against this Persian threat made an agreement amongst themselves, known as the Oath of Plataea, to keep the sanctuaries in their damaged state as a reminder of the Persian impiety.[97] The authenticity of the Oath has come under serious question however. Miles

[89] Thuc. 4.90-7.
[90] Thuc. 4.97; Diod. Sic. 12.70.
[91] Thuc. 4.90.
[92] Diod. Sic. 16.30.
[93] Miles 2014, 134; Arafat 2009, 586-87.
[94] Hdt. 6.84; Diod. Sic. 15.48.
[95] Diod. Sic. 13.57.3-4, 62.4: Hall 2018, 193.
[96] Paus. 3.16.6; Hdt. 9.65: Camp 2021, 73, Shear 1982, 133-4; Miles and Paga 2016, 658, 688.
[97] Hdt. 8.140-44; Paus. 10.35.2; Lycurg. *Leoc*. 81. Herodotus (5.102) suggests that the Greek destruction of the temple of Sardis during the Ionian revolution was to blame for the Persian retaliation.

notes that the first reference to an oath sworn between allies at Thermopylae predated the destruction of the sanctuaries, while Fine suggests that the oath recorded for posterity was not a singular oath originally, but a series of oaths that were later stitched together by an ancient author into the form we know today.[98] We also have one ancient source, Theopompus of Chios, who declared the oath was falsified, though his full work is unfortunately not extant.[99] Several of the sanctuaries damaged by the Persians appear to have remained in a damaged state well beyond the time of the Persian invasion.[100] While the symbolic element of this may have been considered by the Greeks, the pragmatic element probably played a larger role in this consideration. Restoring several sanctuaries all at once, when their original construction would have been staggered over an extended period, was unlikely to have been an expense that many city-states were willing or able to afford in the aftermath of the Persian invasion.[101] During their rebuilding of the city walls, the Athenians, seemingly prioritising speed over cultural heritage, incorporated materials taken from the ruins of their destroyed religious and cultural sites into the wall's foundation.[102] Ultimately, the temples and cultural sites damaged in invasions would have remained a recognisable landmark in the landscape, perhaps continuing to fulfil their original purpose while also having picked up new associations and cultural importance. Through the physical scars they gained via warfare, they might have become sites of memory, connected with the war in which they were damaged in the minds of witnesses. For now, I move away from this topic of memory, though a much more thorough investigation into the way memory and the physical landscape could interact will be carried out in Chapter Five.

Examining the Changes to the Syracusan Landscape During and After the Athenian Invasion of 415-413

The Athenian siege of Syracuse presents an interesting case study, as it demonstrates how a successful siege defence strategy could prevent much of the damage that we see occurring in the landscape during other sieges. By maintaining control of even a small section of the surrounding environment, the Syracusans kept open a connection to the countryside and the outside world, stalling the Athenian siege. Because the Athenians were unable to fully encircle and isolate the Syracusan army, it was not safe to send off raiding parties. Thus, while the lands and buildings around the city were damaged in the course of the siege, much of the wider countryside seems to have spared from these impacts, and so Syracuse did not seem to have the same downturn in the aftermath of the war as was seen in other situations. Without the ability to breach the city's defences, stop the supply of food into the city, or undermine the

[98] Fine 1983, 323-28; See Miles 2014, 129 for a discussion of this debate. The misconstrued oath mentioned is drawn from Herodotus 7.132.
[99] Theopompos of Chios (Philippica, Book 25). This reference was cited in Theon's *Progymnasmata* 2 = F153 and scholars are not sure what to make of the work.
[100] Miles 2014, 123-6; Camp 2021, 79-80.
[101] Camp 2021, 81.
[102] Camp 2001, 60-61; Miles 2014, 123.

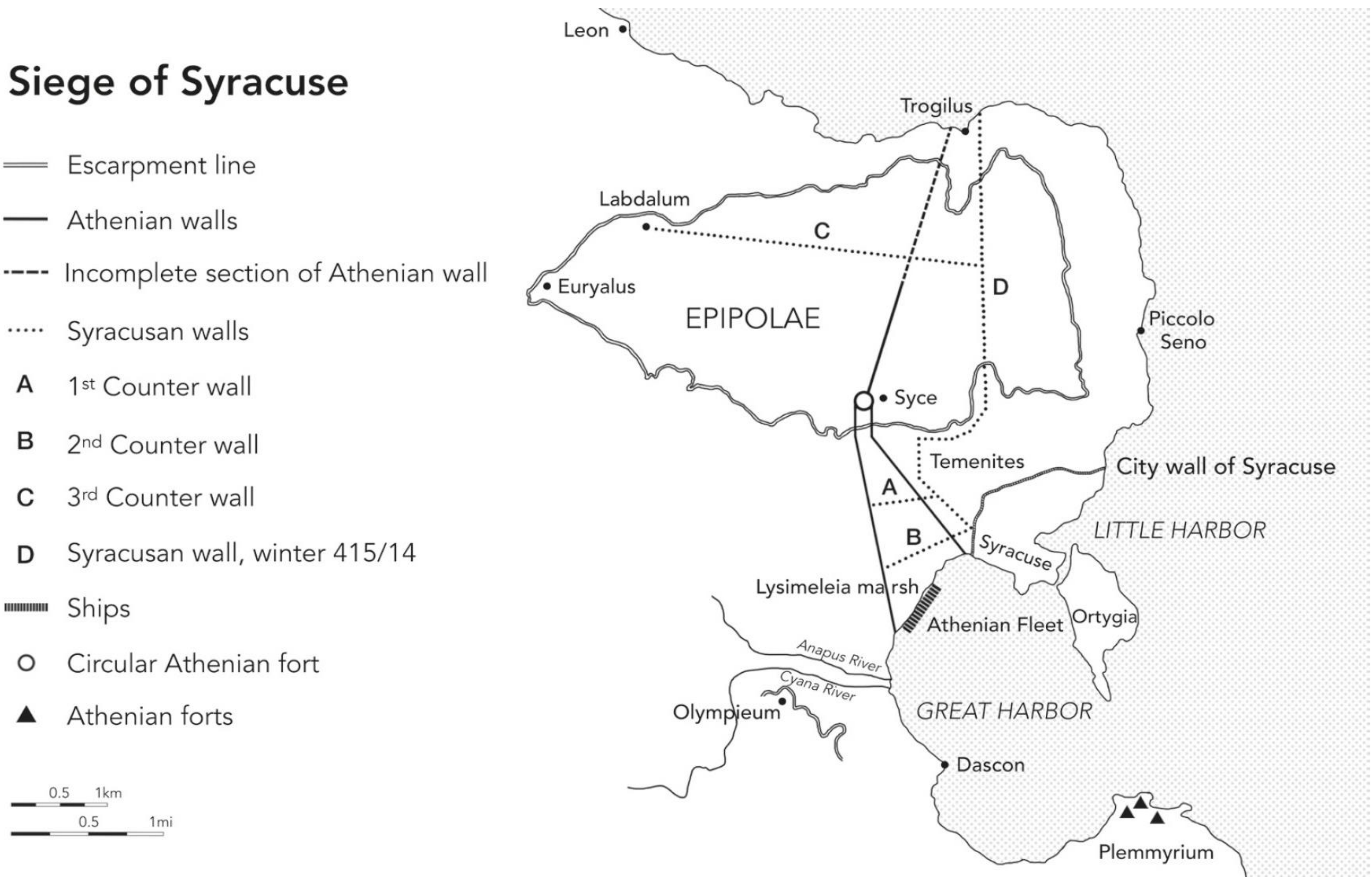

Figure 7. Map of the siege of Syracuse with important sites labelled (from Steinbock 2020, 100)

willingness of the Syracusans to fight by destroying their property outside of the walls, the Athenians could not advance the siege. The campaign was ultimately a disaster for the Athenians, and their inability to fully encircle the city played no small role in their eventual defeat.

The *chora* of Syracuse seems to have been organised in a manner similar to many other Greek city-states, and all of the areas of the environment we have examined heretofore were present in the pre-war Syracusan landscape (see Figure 7). As expected, agricultural estates seem to have accounted for most of the extra-urban construction, and Thucydides reports in a speech attributed to Nicias that Syracuse was self-sufficient in terms of its food supply.[103] The city-state was also known for raising horses and appears to have been able to devote much pastureland to this activity, which is where much of the fighting seems to have occurred.[104] A large quarry sat near the city, and served as the ultimate destination for many of the Athenian soldiers who were captured and enslaved following their defeat.[105] Regional fortresses seem not to have been present in the Sicilian landscape until the fourth century, and fortifications thus seem to have been limited to cities and settlements at this time. The later developments were likely a response to the conflicts occurring in the latter fourth and early third centuries.[106] Epipolae, the name given to the nearby heights located west of Syracuse, where much of the fighting took place, was not fortified at the time of the siege, but saw significant development in the years following.[107] Beyond the city there was a sanctuary, the Olympieum, containing a large temple devoted to Zeus, which served as an Athenian camp during the invasion, alongside a number of tombs belonging to the Syracusan's ancestors.[108] This brief summary of the Syracusan landscape demonstrates the ordinariness of the Syracusan *chora* compared to other Greek city-states and does not itself explain why the city fared better than its counterparts while under siege.

The cautious approach displayed by the Athenians throughout the war, particularly by Nicias, is often blamed as a cause of the Athenian defeat by ancient and modern commentators alike.[109] The initial slowness of the invasion allowed the Syracusan people time to prepare the city and the surrounding environment for the coming siege.[110] This preparation involved garrisoning a number of "fortified posts in the country", preparing traps to hinder the Athenian assault, as well as gathering inhabitants, supplies, and personal belongings from the countryside into the safety of surrounding strongholds and the city of Syracuse itself.[111] Where the Athenians were cautious, the Syracusans were bold as they reportedly

[103] Thuc. 6.20. Hornblower (2008, 356-7) is unsure of the veracity of the statement, though notes that the speech likely presents the perception held by Athenians at the time. Syracuse being self-sufficient contrasted with the Athenians who were almost certainly importing much of their grain at the time.
[104] Thuc. 6.20.
[105] Thuc. 7.87.
[106] Thuc. 6.62, 6.94; Jonasch 2020, 267, 273-4.
[107] Winter 1963, 373-74, 377; Beste 2016, 204.
[108] Diod. Sic. 14.75.6-9. See Holloway 2000, 143-152 for further examples of extra-urban temples found across the Sicilian landscape.
[109] Thuc. 6.63; Plut. *Vit. Nic.*16: Fine 1983, 496; Kagan 1981, 237, 268.
[110] Kagan 1981, 237, 244.
[111] Thuc. 6.45, 49. For the placement of stakes to hinder landing see also 6.75.

marched out and laid waste their own lands, denying these resources to the Athenians and signalling that they, or their strategists, were willing to make sacrifices in order to safeguard their state.[112] When they finally reached the city, the Athenians began to enact their typical siege plan, which was to encircle the city by land, and cut them off by sea with a naval blockade. Compared with many of Athens' former opponents, the Syracusans put up a much stronger fight, launching counter attacks and disrupting the Athenians' construction efforts. Even where the Athenians do seem to have gained the upper hand in the conflict, they appear not to have pressed their advantage, perhaps out of an unwillingness to be drawn into urban warfare.[113] Thus, over the course of this extended siege, the conflict came to revolve around control of the local terrain. While the Athenian forces strived to encircle the city to stop the free movement of the Syracusans and thus to enact an effective siege, the Syracusans resisted this encirclement by constructing a series of counter-walls in an effort to maintain their access to the countryside.[114] Both sides constructed military camps and fortresses at key points around the landscape to support their builders, and these constructions provided the backdrop for many of the conflict's battles, as skirmishes were fought over strategically valuable territory and construction materials [115] Despite their best efforts, and a few close calls, the Athenians were never able to gain full control over the landscape, and this meant that they were never able to progress the siege beyond the initial encirclement stage, as they successfully did at Melos or Potidaea.[116] As the Athenians came to the eventual realisation that they would not be able to complete their encirclement, despair and desperation set in, and they were forced to engage in a series of more hazardous assaults, though to no avail.[117] With the Athenians prevented from fully encircling the city or enforcing a naval blockade, and unable to breach the stronghold's defences through an assault, the siege came to an effective standstill, with the Athenians haemorrhaging resources to remain in the field.

Because the Athenians were unable to isolate the Syracusan army, they were far less able to carry out raiding operations over the course of their campaign. After their initial landing in Sicily, the Athenians carried out several raids while travelling to Syracuse, where they burnt grain fields, destroyed minor fortifications, and enslaved those who resisted.[118] This initial momentum continued once they reached Syracuse and allowed the Athenians free rein over much of the area beyond the walls of Syracuse for the early stages of the war. During this time, the Athenians encamped at the Olympieum sanctuary, destroyed a bridge over the Anapus River, and repurposed material from the local environment for their fortifications.[119] The inability of the Athenians to fully encircle the city meant that Syracusan forces

[112] Thuc. 6.75.
[113] Kagan 1981, 237, 272.
[114] See Mignosa 2020, 332-4 for a breakdown of this construction.
[115] Thuc. 6.99-103.
[116] Kagan 1981, 267.
[117] Thuc. 7.45.
[118] Thuc. 6.62; 6.94.
[119] Thuc. 6.66,

could continue to move between the city and the countryside, however, and the Syracusan cavalry served as a continuous threat to Athenian foragers.[120] Thanks to the alliances they formed with a number of non-Greek Sicel, Italian, and Etruscan peoples, the Athenians seem to have mostly been able to supply their forces with donated food and money, making them less reliant on successful raiding or foraging operations.[121] Once the Athenian army's struggles became known however, this external support began to dry up.[122] Despite the dangers, foraging attempts continued throughout the siege, suggesting there was a shortfall in Athens' resources. Fuel and water in particular seem to have been in short supply, and those gathering these supplies suffered "frequent casualties […] because of the enemy cavalry".[123] It seems extremely telling that when the Athenian reinforcements arrived under Demosthenes, and they regained the military advantage, one of their first actions was to ravage the nearby land around the Anapus River.[124] During their eventual retreat, the Athenians reportedly came upon an "inhabited" village not too far distant from the battlefield from which they were able to gather supplies, suggesting that everyday life was continuing in nearby areas of the countryside despite the siege.[125] Ultimately, for much of the duration of the siege, extensive raiding appears to have been too dangerous a practice to be carried out effectively, which therefore seems to have resulted in only a relatively small area of the countryside being directly impacted by the invasions.

After two years of campaigning, the Athenians had not been able to encircle Syracuse, nor overcome its military. Neither had the Athenians been able to cause enough damage to the surrounding landscape to undermine the morale of the Syracusans or find a means of forcing the populace to surrender. With no viable alternatives, the Athenians made a last-ditch effort to overwhelm the city's defences with a naval assault.[126] When this too ended in failure, the siege was finished.[127] The Athenians attempted a retreat, though the army continued to be harried by Syracusan forces, with the whole Athenian force eventually being taken prisoner.[128] This ended the campaign in a resounding victory for Syracuse. While the fighting was over, however, the clean-up operation was just beginning.

The damage to the city itself seems to have been minimal, though the landscape beyond must have been filled with the mass of camps, forts, towers, and walls built by both sides as they grappled to control the built environment. As the Athenian army was forced to retreat in disarray, they abandoned supplies, construction materials, weapons and even their sick and dying comrades.[129] A great deal of effort must

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[120] Thuc. 7.4.
[121] Thuc. 6.88: Kagan 1981, 248-9. Hornblower (2008, 508) suggests that these contributions were substantial, and that the lists found in IG I^{3}291 might be read as recording the financial donations made by the Athenian allies at this time.
[122] Thuc. 7.13.
[123] Thuc. 7.4, 7.13.
[124] Thuc. 7.42.
[125] Thuc. 7.78.
[126] Thuc. 7.66.
[127] Thuc. 7.72; Diod. Sic. 13.17.5.
[128] Thuc. 7.84-5; Diod. Sic. 13.19.
[129] Thuc. 7.45, 72; Plut. *Vit. Nic*. 26-7.

subsequently have gone into burying or burning the dead, covering up the ditches, and tearing down the encircling walls in order to even begin restoring the landscape. These nuisances were likely somewhat offset by the vast quantity of spoils on offer. Prized armaments, such as the shield of Nicias, were placed on display in the nearby temples, while surplus armaments were collected by the Syracusans, perhaps as mementos, or even simply to be used for scrap metal.[130] While not explicitly mentioned in the texts, the few spoils able to be looted by the Athenians over the course of the siege would almost certainly have been abandoned during the retreat or captured alongside the prisoners and would have been recovered by the Syracusan people. Where sieges typically resulted in wealth being removed from a region, in this case, wealth was added through the goods brought to Sicily by the Athenians, as well as through the slave labour that the Athenian prisoners were subjected to following the war.[131] This undoubtedly aided the Syracusan's relatively quick recovery in the aftermath of the siege compared to other peoples.

In the years following the siege, the Syracusans, under the direction of the newly appointed tyrant Dionysius I, saw numerous developments, particularly in the military sphere. The military landscape saw a great deal of development immediately following the siege, particularly in regional areas, and these state-of the-art fortifications saw continual updates over the coming centuries. The most notable development in the area around Syracuse was the fortification of *Epipolae* – and the accompanying construction of the Euryalos fortress.[132] Built at the site of much of the fighting between the Syracusans and the Athenians, these developments, which continued to be upgraded over the course of the next century, enclosed a great deal of previously unprotected farmland, creating something akin to a *Geländemauer*, and inhibiting the ability of future besiegers to deny the city access to farmland. While the mammoth building effort described by Diodorus Siculus is probably an exaggeration, it is clear that this construction would have involved a massive investment, with an estimated initial cost of more than 300 talents.[133] This was not the only development that took place in Syracuse following the siege. State-of-the-art regional fortresses also saw a great deal of investment from this period onwards, mercenary fighters began to be hired and garrisoned across the countryside, and investments in new siege weaponry were also yielding results.[134] This spending clearly presents a prosperous and innovative state that thrived in the aftermath of the siege, which we can contrast with the Athenian situation explored in the next chapter. Harris suggests that the siege served as the catalyst which propelled Syracuse to modernise their economy and military, while Serrati goes so far as to suggest that fourth-century Syracuse was "a state made by war".[135] Being besieged did not always serve as a death knell, signalling the decline of

[130] Diod. Sic. 13.34.5-6; Plut. *Vit. Nic*. 28. See Baitinger (2020, 65-7) for discussion of the uses of captured armaments following warring in Sicily.
[131] Thuc. 7.86-7.
[132] Beste 2016, 204; Jonasch and Winterstein 2021, 11; Winter 1963, 373-74, 377.
[133] Diod. Sic. 14.18.1-6: Bessac & Müth 2020, 33.
[134] Jonasch 2020, 267, 273-74; Harris 2020; 176-183; Jonasch and Winterstein 2021, 11, 18; Campbell 2006, 48.
[135] Harris 2020, 193; Serrati 2013, 369.

the state in the years to come, though Syracuse's prosperous development following was certainly exceptional, and these developments ultimately placed the city in a much stronger position when they found themselves besieged yet again in 397, though this time by the Carthaginians.[136]

Conclusion of Section One

Over the course of these three chapters I have examined several areas of the extra-urban landscape, and the ways in which they could be transformed over the course of a siege. This often took the form of looting and destruction, though new constructions in the form of military camps or trophies, were also seen. In the next section, we will explore how these environmental impacts affected the individuals and communities who returned to these landscapes once the fighting had concluded. Where exploring the breadth of environmental impacts was the focus of Section One, attention now shifts to the temporal aspect of these impacts. As will be shown, not all city-states fared as well as Syracuse in the aftermath of a siege. Concerns about the impact to the food supply, productivity and security were problems that had to be addressed, though resources were often hard to find in a ravaged landscape. Furthermore, the loss of population, tools, and stored food meant that former levels of productivity were more difficult to achieve. Beyond these tangible impacts, a host of intangible impacts can be identified, particularly in the behaviours and memory of affected individuals. The landscape, changed during the course of war, served to remind witnesses of their experiences of the siege. I examine how living in an environment shaped by war could result in behavioural shifts, and how this might affect the future decision making and outlook of affected individuals for many years to follow.

[136] Diod. Sic. 14.62-78.

Section Two: The Transformation of the Landscape and its Inhabitants in the Post-Siege Period

Chapter Four: The Aftermath of the Siege

All sieges eventually came to an end. In cases where the stronghold faltered, disaster could follow for the sheltering population, who faced exile, enslavement, or even mass slaughter. This worst-case scenario was a theme repeatedly played out in contemporary literature, as in the *Iliad*, Sophocles' *Seven Against Thebes* and Euripides' *Trojan Women* and *Hecuba*,.[1] Yet, in many instances the victorious besiegers were more merciful, and were content with obtaining political concessions from the defeated populace.[2] In such situations, and when the besieged were able to successfully repel the besiegers or come to terms, the sheltering populace found themselves free to leave the stronghold and once again return home. It is the individuals that returned to the *chora* in the post-siege period that serve as the focus of this section of the study. As has been established in the previous section of this work, siege warfare often transformed the existing landscape, and this transformation introduced a number of obstacles that had to be overcome. Even accessing basic necessities would have presented a serious challenge to individuals who had already endured a lengthy and exhausting siege, though these basic needs would need to be met before the populace could even think about restoring long-term productivity and wealth, however. Once the immediate crisis had been managed, individuals and communities still had a great deal of work ahead of them, as efforts shifted to restoring the other areas of the *chora* affected by siege.

There are three related areas which I have identified as particularly affected by sieges over the longer-term. These are the productivity of the region, the security of the city-state, and behavioural changes among affected populations. To explore these aspects, I have chosen to use the case study of Athens in the aftermath of the siege which led to her overall defeat in the Peloponnesian War. Following their disastrous defeat in Syracuse in 413, the Athenians were unable to prevent the Spartans from constructing a fortress at Decelea, with which they were able to occupy Attica year-round.[3] For the decade-long period after this fortress was established, Athens lost access to much of its countryside, which was subjected to ongoing raiding. Though not officially under siege, the Athenians were certainly hemmed in, and their countryside bore the brunt of this occupation. Eventually, following their success in the naval battle at Aegospotami in 405, the Spartans were able to close the vital sea routes that were keeping Athens supplied and place the city under siege. After a tense yet relatively brief siege, the starving Athenians capitulated to the Spartans in 404.[4] Having come to terms, the Athenians, though spared from major retributions, still faced the issue of having to rebuild their food supply and economy, while rethinking their defensive strategy, which were all significantly modified over the course of the

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[1] Aesch. *Sept*. 78-115, 184-195, 248-254, 288-365; Eur. *Hec*. 21-33, 490-498, 917-952; *Tro*. 9-40, 298-305, 470-500, 1260-1283.

[2] Xen. *Hell*. 2.2.5. Athens was made to abandon her overseas territories and pull down her walls following the city's surrender in 405/4. Despite this the Athenian people remained unmolested by the Spartan soldiers.

[3] Thuc. 7.27.

[4] Xen. *Hell*. 2.2.5.

previous decade's occupation. Athens serves as an excellent case study here, not only for its context, but also for the wide corpus of archaeological and literary material (both ancient and modern) examining the affairs of the city-state, which cannot be rivalled by any of the other city-states.

Immediate Concerns of Individuals Exiting a Siege Situation

Enduring a siege would have been an exhausting affair, both physically and mentally. Conditions in besieged cities were often poor, as many cities were unfit to manage such an influx of additional people. During the early evacuations of Attica at the outset of the Peloponnesian War, many refugees in Athens were living in temporary housing, occupying any vacant area of the city they could find, including the consecrated areas—an action supposedly warned against by an oracle.[5] The cramped conditions in the city feature in Aristophanes' *Acharnians,* where Dikaiopolis mentions "sleeping among the rubbish on the city walls".[6] As previously noted, the cramped conditions proved disastrous when plague struck the city, and despondency became widespread.[7] Admittedly, following the massive population losses to plague and the disastrous Sicilian expedition, the Athenians probably found their city a lot less cramped. This likely swelled again in the very latest stages of the war as Lycurgus sent refugees to Athens to put pressure on the city's food supply. Similarly, during the siege of Nora in 319, we hear of the besieged army of Eumenes being crammed into an area of just 360 metres in circumference.[8] Eumenes had to come up with novel methods to keep his soldiers and horses exercised, both to keep them in fighting shape, but also to keep them occupied so that they did not succumb to crippling boredom. As a siege dragged on, the limited food supply was often stretched, and rationing was often required to spread this thin food supply.[9] We have already seen that sieges could lead to starvation, and even reports of cannibalism occurring in desperate situations.[10] In addition to this physical suffering, the tension and fear that accompanied the knowledge that a hostile army was camped nearby must have been immense and permeated each day with an unknowing sense of dread.[11] We find also a longing for the return to normal life, to occupy and defend the land and fields that the populace had worked so hard to maintain, even if it cost them their lives.[12] When suddenly freed from their confinement at the conclusion of the siege, we might imagine that many individuals felt both apprehension alongside relief concerning their future, as they now had to deal with the consequences of the siege.

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[5] Thuc. 2.17, 2.45.
[6] Ar. *Ach.* 72.
[7] Thuc. 2.48-54.
[8] Plut. *Vit. Eum*. 11.
[9] See Xen. *Hell*. 5.3.16 and Plut. *Vit. Dem*. 34. for direct mentions of rationing during sieges. Aeneas Tacticus (40.8) also mentions that a discussion of rationing during sieges was to be found in his non-extant *Military Preparations.*
[10] Xen. *Hell.* 2.2.11; Diod. Sic. 13.107.4; Thuc. 2.70.
[11] For some of the many examples of panic and fear during sieges see Xen. *Hell*. 2.2.4-10; Diod. Sic. 14.50.4; Plut. *Vit. Nic.* 14. See also Aesch. *Sept*. 78-125, 240-270 for a fictional, though pertinent example of panic during siege.
[12] Thuc. 2.16-21.

The affected population was unlikely to have been left with many possessions following a siege. Even in situations where the populace had advance warning of an incoming army and were therefore able to bring vital supplies and personal possessions with them into the city, these were almost certainly reduced over the course of the siege, perhaps bartered for food or other necessary goods. Price gouging is mentioned during the siege of Rhegium for example, as supplies of wheat dwindled in the besieged city.[13] With the possible exception of the soldiery, few of the refugees from the countryside were likely to have been working for pay in a besieged city. In the meantime, those possessions unable to be secured were likely to have been gathered up by raiders. Such problems were magnified in cases where the victorious besiegers decided to expel the existing population, as we have seen in the case of the Potidaeans, who were forced to depart with only the clothes on their back.[14] We find other reports of roads filled with desperate survivors following sieges, and we must wonder how well these individuals were able to fend for themselves, especially when we read of children and the elderly being abandoned by their communities.[15]

The other aspect to consider here is whether individuals still had a physical home to return to. Among the population who made their home in rural areas, we would expect that many returned home to find a collapsed heap where their houses previously stood. As noted in Chapter One, certain elements of these farmhouses were susceptible to burning, including the supporting structure, though the foundation and roof tiles would likely have survived. Hanson thus suggests that these structures could be relatively quickly rebuilt, though this could still take several months.[16] This estimate also requires that the assailants had not gone to the extra effort of damaging or stealing the roof tiles, as the Thebans are reported to have done in Attica following the fortification of Decelea.[17] Though less common, city dwellers were not immune to losing their houses following a siege. In cases where a besieging force was able to carry out a successful siege operation, captured cities could be razed or torn down at the whim of the invaders.[18] An example of this is the case of Plataea in 427, where the Spartans “razed [the city] to the ground from the very foundations, and built onto the precinct of Hera, an “inn [καταγώγιον] two hundred feet square” and using materials from the city wall “a stone chapel of a hundred feet square”.[19] Though Athens was spared such a fate in 404, the city had previously seen significant destruction at the hands of the Persians in 480.[20] Thus many of those coming out of siege situations would have been left with very little in the way of personal possessions or resources, and may not even

[13] Diod. Sic. 14.111.1.
[14] Thuc. 2.70.
[15] Xen. *Ages*. 1.20-22; Diod. Sic. 13.111.2-4.
[16] Hanson 1998, 74.
[17] *Hell. Oxy*. 17.4: Hanson 1998, 74.
[18] For more of the many examples of cities being razed following siege see Diod. Sic. 14.15.1-4 on Naxos and Catania or 14.58.3-4 in the case of Messene. Thebes was famously destroyed following its defeat at the hands of Alexander the Great’s forces (Plut. *Vit. Alex.* 11).
[19] Thuc. 3.68.
[20] Hdt. 8.53, 9.13: Garland 2017, 105-8.

have had a physical home to return to. Before thoughts turned to restoring what had been lost, the immediate focus of these individuals must have been to secure access to even the most basic of necessities, such as food and water.

Evaluating the Short-Term Effects of Ravaging upon The Food Supply

The question of how impactful warfare was to the ancient food supply has been long debated by scholars. Hanson's work has been pivotal in this area, highlighting the difficulties and effort involved in widespread agricultural destruction.[21] Hanson ultimately concluded that the impact of warfare on the food supply would have been relatively minor beyond the immediate term.[22] This has become the dominant view in the scholarship, though some aspects of Hanson's argument have since come under question.[23] Neither Thorne nor Chaniotis are entirely convinced by Hanson's argument, and each argue that the economic impacts of ravaging could be severe, particularly in cases where the affected city-state was subjected to repeated invasions or lacked the wealth to fund their recovery in the post siege period.[24] It is important to note that Hanson's arguments were made in consideration of warfare more broadly than just sieges, and in the updated edition of the work, Hanson does make some concessions in cases following sieges, where he identified more intense impacts in the years following, though notably not to the food supply.[25] Foxhall and Osborne have also noted the exceptionality of siege warfare in affecting longer-term recovery, particularly in regards to the psyche and morale of the affected populace, which they identify as leading to political problems in the future.[26] In his extensive study of the Greek food supply, Garnsey concludes that it was only during siege situations that true famines were encountered in the Classical Greek world.[27] He distinguishes these "famines" from "subsistence crises", which he argues were more common but did not have the same consequences for a city-state and its people as a true famine did.[28] Contemporary writings of the ancient Greeks meanwhile do highlight cases of starvation occurring during sieges, though the accuracy of such reports is hard to verify, and there is the possibility that the situations were exaggerated, or that the author was playing up literary tropes.[29] These contemporary accounts tend to turn their attention elsewhere as soon as the conflict is concluded, and the reader is left uncertain as to the fate of populations coming out of long sieges.[30] It is not clear whether we should we read this silence as confirmation of a widespread recovery of the food supply, or whether the authors were simply unconcerned about the struggles of the populace once the siege had concluded. All of these analyses so far have tended to examine the problem

[21] Hanson, 1998.
[22] Hanson, 1998, 59-60, 67, 182.
[23] Millett 1993, 180; Hughes 2013, 3-5; Foxhall 1993, 135-6; Strauss 1986, 44.
[24] Chaniotis 2005, 119-124; Thorne 2001, 240, 252-3.
[25] Hanson 1998, xiii-xiv.
[26] Osborne 1987, 154; Foxhall 1993, 142.
[27] Garnsey 1988, 6, 35-7.
[28] Garnsey 1988, 6.
[29] See Thuc. 2.70; Xen. *Hell.* 6.2.8; Diod. Sic. 14.111.1-3: Hanson 1998, 174-5; Garnsey 1988, 27, 35.
[30] Fachard and Harris 2021, 15.

on a macro or city-state level scale, and few have looked into where individuals were likely to have sourced food in the aftermath of a siege. This problem is where I now turn my attention.

In some rare instances, we find the victorious besiegers willing to share food with defeated populations. This occurred following the fall of Plataea, where the Spartan victors provided food to the defeated Plataean garrison for a few days, before eventually deciding to execute these prisoners.[31] This must have been an extremely temporary solution at best, and the opposing army was unlikely to have remained in the area following the conflict. Pre-existing food stores would have offered the simplest solution to this dilemma. As we noted in Chapter One, country dwellings could hold extensive stores of grain used for household consumption or held for future sale.[32] Where possible, Garnsey suggests that a two year supply of surplus grain served as an ideal amount to keep on hand, allowing the household to survive a failed harvest or other crisis.[33] Many of these crisis stores would have been depleted over the course of an extended siege, whether they were evacuated into the stronghold alongside their owners, or taken by the besieging army's foraging bands.[34] The other problem we have to consider is where the seeds required to restart grain agriculture were sourced from. Presumably, these seeds would be kept in a similar manner to the grain for eating and would be subject to the same issues outlined above, yet the sources are silent in this area. Foxhall raises the possibility that secret stores of hidden crisis food (and seed for planting) might have existed, tucked away safely in mountainous regions or buried beneath the ground.[35] This is a practice carried out in modern Methana, though as Foxhall herself notes, we have no direct evidence of this from Classical Greece.[36] As each stronghold within a city-state was likely to have been responsible for its own provisions in times of siege, and likely to have been effectively isolated from the others, it is probable that some sites fared better than others and were left with remaining stores at the war's end that might be shared out among the wider populace once freedom of movement could be restored.

Similarly, there were probably areas of the countryside that were spared from extensive ravaging, whether because they were too distant, too well defended, too inaccessible to raiders, or simply remained hidden from the raider's view. Of interest here is the unnamed village encountered by the retreating Athenians near Syracuse, whose inhabitants seem to have been able to continue working their fields despite the Athenian siege.[37] These regions may have been able to continue producing and storing food internally, even if transporting supplies across the countryside was an impossible task while the wider region was occupied. The mountain refuges discussed in Chapter One also seem to have been able to produce food throughout the siege period, and likely continued to support their temporary

[31] Thuc. 3.52.
[32] McHugh 2017, 57; Foxhall 1993, 5, 11-12.
[33] Garnsey 1988, 54.
[34] Thuc. 2.13-4, 5.115; Aen. Tact. 6-8, 10; Diod. Sic. 12.50.5, 13.81.3.
[35] Foxhall 1993, 141.
[36] Foxhall 1993, 141.
[37] Thuc. 7.78.

inhabitants until they could return to their homes.[38] Walled towns and cities were probably able to devote at least some space to food production, and Foxhall suggests that small gardens and vineyards might have played a more considerable role during sieges than often thought.[39] The literature features little conclusive evidence of the practice in this period, though the interest in *Geländemauern* in the decades following the Peloponnesian War indicates that the Greeks thought this practice worthwhile.

Imported food would almost certainly have played a considerable role at such times. Once a blockade had been lifted, we might assume that attempts to import food were carried out with the greatest urgency. This was likely easiest for those city-states with sea access, as grain could be purchased in large quantities from markets like those in the Black Sea region, though this would require that unloading docks remained in working order.[40] Road transport was typically a more costly endeavour and would have been difficult in areas that had lost much of their working livestock.[41] Notably, in the case of Athens, the overland route from Euboea served as the most efficient source of imported grain before the occupation of Decelea and the loss of Euboea. Having to seek alternate sources of grain, the Athenians shifted their efforts to the Black Sea region and a lengthier naval transport route into Piraeus, a practice which they would continue over the next century.[42] The Greek world's fragmentary nature was likely beneficial here, as it was unlikely that every state would be at war at the same time. This meant that while individual city-states might have seen their countryside devastated by occupying forces, neighbouring city-states were often free from conflict, and could continue to produce food to supply their populace, and perhaps even a surplus that might be exported. Demand for imported food in besieged cities would have been elevated of course, though whether the prices rose to match this is unknown. Garnsey points to excessive price movements seen in sieges in other periods, though there seems to be little evidence either way for the Peloponnesian War period.[43] In the case of Athens, the city-states' previous familiarity with grain importing and strict procedures for the practice built into their laws might have helped prevent grain dealers from charging egregious prices.[44]

There were probably sources of food available in the environment if one were willing or desperate enough. While hunting does not seem to have been a common means of acquiring food in peacetime, a fortuitous catch could have provided a great burst of much-needed energy.[45] This is of course provided that the invading army did not hunt out the region of large game, either for food or amusement, as Agesilaus' Spartans were reported to have done in Phrygia in 395-394.[46] Birds and hares were probably

[38] Hughes 2013, 132.
[39] Foxhall 1993, 137.
[40] Garnsey 1988, 137-9.
[41] Thuc. 7.27.
[42] Moreno 2007, 117-126
[43] Garnsey 1988, 25.
[44] Garnsey 1988, 30.
[45] Chandezon 2015, 138; Fox 1996, 122.
[46] Xen. *Hell*. 4.1.33.

easier propositions than larger game and would be found closer to agricultural areas. In one of his *Letters of Farmers,* Alciphron has a farmer turn to hunting birds because the harsh winter prevented any agricultural work from being done, suggesting a precedent for this type of hunting.[47] Likewise the marine environments discussed in Chapter Two would have suffered little consequence due to siege, and coastal communities likely resumed fishing activities without much delay. The difficulty of damaging fruit and olive trees has already been explored, and even a tiny yield from damaged trees would be greatly beneficial.[48] Foraging in the *eschatia* or forests could also have yielded results for the desperate, and there was probably less competition with the raiders for wild herbs or vegetables. Even twigs, bulbs, vermin, boiled leather, grass, or human flesh might become palatable to those desperately hungry, as Garnsey highlights.[49] While these would not have yielded a diet standard for the period, any calories would have proven vital in a dire situation and may have served as the difference between survival and starvation.

However it ended up being achieved, affected populations appear to have managed to find enough seed in the post-siege period to restart planting, and enough food to survive until this first harvest, which would have dramatically eased the burden on the food supply. While individual cases of starvation likely arose in the post-siege period, we would expect these to reduce following the reintroduction of the agricultural cycle. In Athens, agricultural activities seems to have been widely restarted within a year of the end of the Spartan siege.[50] Thus, despite the traumatic experience of being besieged, and the extensive disruption to the countryside, the resilience of the population saw that the land was made productive once again. This does lend weight to Hanson's argument that Greek warfare had a limited impact to the food supply, though the restoration of agricultural activities was only one stage in the ongoing process of recovery following a siege.[51]

Evaluating Long-Term Impacts to Productivity and the Economy

Despite the restoration of agricultural activities, the consequences of the siege would have detrimentally affected the productivity of the region for a much longer period. One of the biggest issues was the loss of population during the siege. While the figures might vary greatly between different siege events, in most cases the population would have fallen over the course of a siege.[52] In Chapter One we explored the causes of this decline, due to deaths in battle, starvation during the siege itself, or through individuals fleeing the region, for example. Akrigg notes that much of this loss would have been a consequence of

[47] Alciphron 2.27.
[48] Hanson 1998, 56, 65.
[49] Garnsey 1988, 29. See Plut. *Vit. Dem*. 34 for a reference to mice being fought over. Diod. Sic. 14.111.1-3. discusses the eating of boiled leather and grass after the 11-month siege of Rhegium. The cannibalism in Thuc. 2.70 has already been mentioned.
[50] Isoc. 16.13; Xen. *Hell*. 2.4.1: Hanson 1998, 166-69.
[51] Hanson 1998, 172.
[52] Akrigg 2019, 161.

fighting, and thus overwhelmingly drawn from the city-state's pool of adult males.[53] I have already noted that activities such as farming or mining were not easy tasks, but required a great deal of intensive manual labour, so the loss of adult males in battle would have been noticed. What was likely far more devastating, however, was the loss of members of the enslaved population. It was typically these individuals who were forced to carry out the most taxing roles, whether working the mines, digging trenches for vineyards, or threshing grain. The loss of the "20,000" enslaved workers in the Decelean stage of the war would have been one of the greatest blows to Athens' productivity. Regardless of the actual numbers lost, these workers were reportedly "highly skilled" (χειροτέχναι) manual labourers, and thus would not have been easily replaced by drafting in additional unskilled labour.[54] Harvest time was likely when the reduced personnel would have been most noticed, as even in normal conditions the extremely time-sensitive nature of the harvest meant that all available labour, including the wealthy, women, and children were needed to help out.[55] Unless enough personnel could be found to assist in the post-siege period, valuable produce might have gone to waste at a time when it was most needed.

Furthermore, individuals coming out of a siege were unlikely to be as fit and healthy compared to normal conditions. Rationing, whether during the siege or in its aftermath, would have reduced the population's strength. The case of Eumenes discussed above suggests that cramped conditions and idleness could lead to muscle atrophy if not carefully managed.[56] Having to undertake much of the standard farm labour, in addition to any of the food-seeking activities explored above, would have been arduous for an already exhausted population. In many situations, clearing or construction efforts would also have been necessary, so the populace must have gotten little rest in this period. In the immediate harvests following a siege, in which many of the skilled workers had been lost, and general exhaustion afflicted the populace, there was almost certainly a significant reduction in output from the fields. A recognition of the difficulties warfare presented in this area appears to be found in contemporary lease agreements. As Hanson notes, rental agreements often excused leaseholders from their required duties or reduced rents owed in the case that invasion or warfare broke out and disrupted normal conditions.[57] The freedom from tasks such as clearing during these periods suggests that the priority for the lessee was understood to be the restoration of productive agriculture. This was unlikely to have been a wholly selfless action on the part of the lessor, however, and by allowing the lessee a chance to restore their

[53] Akrigg 2019, 161.

[54] Thuc. 7.27: Akrigg 2019, 108-9. There has been some debate over whether Thucydides was referring to mine workers or farm workers here. The Greek (χειροτέχναι) gives no help. Hornblower (2008, 591-2) thinks it likely to have included both groups.

[55] Dem. 57.45. See Xen. *Mem.* 2.7 for an interesting discussion between Socrates and Aristarchus, who in post-siege Athens had fourteen female guests taking refuge in his home. Aristarchus had not considered putting the women to work despite his dire economic circumstances until Socrates raised the idea. This may hint at the notion that women (or at least elite women) were generally not considered as part of the general labour pool.

[56] Plut. *Vit. Eum*. 11.

[57] IJG 12, lines 152–154; IG II2 2492, lines 12–14.; IG XII, 9, 191, lines 13–17; Hanson 1998, 10, 27 (note 11), 55, (note 34); Fachard and Harris 2021, 21-22.

livelihood, it boosted the likelihood that the lessee would be able to continue to pay their rent in the years to come.

The loss of animal power would likewise have led to issues with productivity across a range of industries. In the case of Athens, Thucydides reported a loss of "all the small cattle and beasts of burden," following the occupation of Decelea.[58] Mining, quarrying and construction would have been drastically impacted by the loss of draft animals to manoeuvre the heavy stones or ore. While specialised tools that allowed humans to lift and transport quarried blocks were available to the Greeks, these must have been far less efficient, particularly for long-distance transport.[59] In the building of the wall upon Epipolae, in Syracuse for example, Diodorus reports that 60,000 workers and 6000 oxen were involved.[60] While the numbers involved are probably inflated, the idea that so many oxen were required is indicative of their importance in construction.[61] Draft animals were probably less integral for agricultural, and there were many farmers, especially among the less wealthy, who made do without.[62] Having access to draft animals would have allowed for much more extensive ploughing, however, and was likely to have boosted production.[63] The loss of animals also represented a loss of important fertiliser, in the form of manure as well as a loss of the indirect storage identified in Chapter One. Any money and resources previously invested into a stolen animal was instantly lost, meaning that farmers would have to reinvest scarce resources in fattening up new animals, assuming they could even be acquired at such times.[64]

Following the ravaging, many of the *chora*'s production chains were left severed, dramatically affecting the potential output of the space. As discussed in Chapter One. damaged olive trees could result in many years of downtime, while stolen livestock would have to be replaced before the supply of milk and wool could restart. The mines of Laurion in Athens likewise seem to have ceased activity for decades following the occupation of Decelea probably influenced by the loss of workers mentioned above.[65] All of this would have meant that many industries were left without the inputs needed for their production chains. This may have been a moot point, however, as the destruction of the infrastructure required by industries would have stalled production. While the destruction of farming infrastructure, including barns, granaries, livestock shelters and millhouses, is noted by Hanson, the consequences are not considered in relation to the restoration of agriculture in post-war Athens.[66] Nor, as Foxhall notes, does Hanson consider agricultural installations, such as olive presses or threshing floors.[67] To this list I would

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[58] Thuc. 7.27; "πρόβατά τε πάντα ἀπολώλει καὶ ὑποζύγι"
[59] Wurch-Kozelj 1988, 56-58.
[60] Diod. Sic. 14.18.4-7.
[61] Bernard (2018, 102) agrees that the account of Diodorus is likely inflated, though believes a significant number of oxen would have been required. For comparisons sake, he believes almost 200,000 "yoke days" would have been required to build the Servian Walls of Rome, which was a project comparative in scale to that of Syracuse.
[62] Halstead 2014, 290.
[63] Bresson 2015, 121, 474 n.79; Akrigg 2019, 235.
[64] Flannery 1969, 87.
[65] Mussche 1998, 14, 63-4; Leese 2005, 104; Akrigg 2019, 223; Strauss 1986, 46.
[66] Hanson 1998, 71-2, 166-71.
[67] Foxhall 1993, 138.

also add kilns, forestry huts, and beehives, though there are countless other examples that could be used. This infrastructure would not necessarily have been easily replaceable, and the fact that they were often shared by a community suggests that they were likely too expensive for a single household to reasonably fund alone.[68] The communal nature of many of these processing sites also meant that multiple agricultural estates might be impacted by the loss of a single olive press, for example. In a post-siege period of severe economic decline, it may have taken many years before individuals could afford to replace lost infrastructure, potentially resulting in goods being unable to be processed into their final stages in the meantime or increased transport costs as goods had to be carried to whatever infrastructure remained functional. The banking up of olives or grapes would not have been particularly problematic, though having to find storage for banked-up ore or unprocessed grain may have presented a far greater logistical challenge. In some cases, as with olives, processing could be done by hand, though only in small amounts and the process was both inefficient and wasteful.[69] Until the production chains were restored in full, it is difficult to see how the *chora* could hope to be anywhere near as productive as it had previously been.

Excluding rare cases like that of Syracuse examined in the last chapter, the wealth of the besieged city-state was reduced over the course of a siege. The destruction of property, the theft of livestock and loss of crops due to ravaging played a considerable role in this reduction. Strauss suggests the cost to replace these losses would have been ruinous for some individuals.[70] The losses did not necessarily fall upon all equally, however. In the case of Athens, Strauss argues that those heavily invested in naval contracts or with holdings in the city would have been far better off than those with rural holdings.[71] This was not always a safe strategy, as there was always the threat that the city might be taken, sacked, or destroyed following a siege, and the wealth it contained lost. While the absolute wealth of the city-state was reduced, there was great potential for shifts in relative wealth between members. Of course, the wealthy individual who lost half his estates and holdings was still much better off than a poorer man renting a hovel. The purported differences in reaction to the invasion between those of different wealth classes is presented in the *Constitution of Athens*, attributed to Xenophon, which reports "of the Athenians, the farmers and the wealthy curry favour with the enemy, whereas the people, knowing that nothing of theirs will be burnt or cut down, live without fear and refuse to fawn upon the enemy".[72] Whether the statement was true or not, it speaks to a brewing dissension within the city-state. Even the perception of an unequal impact to distinct groups of the city-state could have undermined the collective identity of its people and fractured the state from within. Despite all of this, Akrigg suggests that the long-term effects of the siege would have ultimately created a fairer society in Athens, with more evenly

[68] Foxhall 2020, 3, 12: Halstead 2014, 208-10.
[69] Foxhall 2007, 132.
[70] Strauss 1986. 45.
[71] Strauss 1986. 45.
[72] Xen. [*Ath. Pol.*] 2.14.

distributed wealth among its members. While the wealthy lost more as a consequence of the siege and loss of the empire, the poorer Athenians lost relatively little, and their labour became far more valuable in the post-siege period.[73]

Over time, many of these impacts to productivity could be undone. Nature would take care of some of this restoration. Given time, and a lack of interference from humans or livestock, trees and forests could grow back to their former extent. Newly planted fruit trees would yield fruit within a decade, and forests would see significant regrowth within a decade or two.[74] The tools, processing sites and other infrastructure could be replaced gradually, particularly once individuals were able to bring in capital. The impact to human populations probably existed for quite a few years, though given a period of relative peace, it seems that population numbers could bounce back. We know that Athens lost much of her population to the plague and fighting in the early years of the Peloponnesian War though by 415, at the outset of the Sicilian expedition, Thucydides has Nicias claim "it is only recently that we have had a little respite from the plague and the war, and so are beginning to make good our losses in men and money".[75] While this does not suggest the population was back to previous levels in 415, it was assumed by the author to be improving within less than two decades. Of course, losses from the failed siege in Syracuse, the battle of Arginusae in 405, and the siege of Athens in 404 probably saw the city-state's population drop even lower. How easily the enslaved population could be restored to previous numbers is a little more difficult to follow.[76] In *Ways and Means* (Xenophon's last work, written around 355), Xenophon suggests that the mines of Laurion were still not working at full capacity, which as Mussche identified was likely connected with the loss of the enslaved workers following the occupation of Decelea.[77] Xenophon's other hint that Decelea served as an ongoing issue for slave populations in Athens is a reference to the "cost" of enslaved individuals changing after "the Decelean Affair".[78]

Ultimately, much like with the food supply, the resilience of Athenian individuals seems to have supported the eventual restoration of its economy. In some ways the resilience of the Athenian economy following the siege of 405/4 serves as a reflection of the resilience of its people, but also of the privileged position that the Athenians held compared to other city-states. Thorne reminds us that Athens should not be considered a typical city-state, as it had access to far greater resources and population to fall back upon in times of crisis.[79] Neither was Syracuse for that matter. Because of this, Thorne argues that we should not expect that the relatively quick recovery of the food supply and economy seen in Athens to

[73] Akrigg 2019, 238.
[74] Hanson 1998, 60, 65 n 66.
[75] Thuc. 6.12.
[76] Strauss 1986, 46 suggests there would have been a new supply of slaves relatively quickly, though suggests the Athenians were slow to replace their losses as other investments were more appealing.
[77] Xen. *Ways and Means.* 4.5-6: Mussche 1998, 63-4.
[78] Xen. *Ways and Means.* 4.25. This leaves many questions unfortunately. Xenophon references this change in the cost of slaves, though never specifies actual prices. See Powell (2021, 4) for further discussion of Xenophon's numbers in this work.
[79] Thorne 2001, 252-3.

have been emulated elsewhere, and that other states (Thorne names Phlius), likely faced a far more difficult road to recovery.[80] In his examination of this problem in the Hellenistic period, Chaniotis similarly concludes that the economic consequences of ravaging could be severe, giving further credence to Thorne's argument.[81] I am inclined to agree with this assessment, though the relative paucity of evidence that we have for the other city-states compared to Athens prohibits a definitive conclusion. Yet while the efficiency of post-siege economies was likely to have initially been severely depressed, as the losses in animals, tools, infrastructure, enslaved labour, and resource production were gradually made good and the economy eventually recovered, the productive impacts would have been felt less and less in the day to day lives of Greek individuals. The consequences of siege warfare were not all tangible, however. Despite appearing to weather the economic challenges presented by the 404 siege comparatively well, the Athenians appear to still have been rattled by the siege, and their experience seems to have affected their mentality and behaviour in its aftermath—which is where I now turn my attention.

Behavioural Transformations and Mentalities in the Post-Siege Period

Regardless of how we today evaluate the consequence of particular sieges, it is important to recognise that invasive warfare could, and often did, present an existential threat to ancient individuals. This threat was undoubtedly recognised by both individuals and city-states, which lead to significant changes in behaviour and in mentalities in the aftermath of a siege. Perhaps more overtly than before, the conflicts of the Peloponnesian War demonstrated to the Greek people the importance of protecting one's countryside from invading forces. In post-siege periods we therefore find significant amounts invested into the repair of damaged fortifications, upgrades to existing defence networks, and towards the development of wholly new fortifications, often at a time of economic decline. This was almost certainly a pragmatic response to the situation that these city-states found themselves in at a time where subsequent invasions could prove even more disastrous.[82] While a single siege could be devastating, we have already seen that it was possible to recover from its consequences. Yet this recovery was probably only made possible by exhausting pre-existing stores of food, as well as stripping whatever could be eaten from the land. Were a second invasion to follow the first, the consequences could be far more deadly, as there would have been fewer resources to fall back upon.[83] This fear is probably what drove much of the investment in defence and personal security in the years following a siege, and seems to have occurred both privately, as individuals developed defences for their personal belongings and property, and publicly, as states constructed large-scale defensive works to protect the countryside and its inhabitants. This is apparent in the case of post-siege Athens, where we find increases in both public

[80] *Xen. Hell.*7.2.1-10- Thorne 2001, 253
[81] Chaniotis 2005, 119-128; 2011, 125-127, 131.
[82] Garnsey (1988, 23) suggests that a single failed harvest was not fatal for a Greek city-state, but subsequent failed harvests would become increasingly fatal.
[83] Chaniotis 2005, 124; Foxhall 1993, 142.

and private investment in the area of security.[84] As we have seen previously, however, profit-seeking activities continued after a siege, though these were often now balanced by new considerations, such as securing the internal food supply, safeguarding personal possessions, and protecting the land itself. The new balance between profit-seeking and investment in security reached by the Athenians has been labelled by some as an economic depression or even a 'crisis of the *polis*.'[85] Though I have argued that the city-states' productivity was reduced in the post-siege period, I disagree with the crisis label. The crisis in my view was the siege itself, and the resulting shifts in behaviour represented a natural, understandable response to such an event.

This conservatism, or "defensive mentality", as Ober terms it, seems to have been particularly prominent in Athens following the siege of 405/4.[86] In this post-siege period there arose a long-standing cynicism and distaste for the Periclean strategy adopted throughout the Peloponnesian War among the works of orators and philosophers in the fourth century.[87] Isocrates, for example, attacks the cowardice of the Athenians who would not stand up to the Spartans ravaging Attica, but chose instead to invade the lands of the Sicilians.[88] As a result, the Athenians seem to have embraced a new defensive strategy in this period, centred around the development of regional defence, seemingly with the goal of stalling invading forces at the borders before they could reach the vulnerable Attic countryside. Ober originally posited that the numerous regional fortifications developed near the Athenian borders between 385 and 340 were designed as a type of all-encompassing internal defensive network, resembling something akin to an ancient Maginot line, which he termed Fortress Attica.[89] While Ober's work on mentalities is still relevant today, the notion of Fortress Attica has since fallen out of favour.[90] Even if not part of an all-encompassing strategy, it nevertheless remains clear that a great deal of regional development was undertaken across Attica over the course of the fourth century. Fachard suggests that we should instead envision this development of new regional fortifications to have been an ongoing process, whereby the military landscape was gradually being connected with pre-existing settlements and integrated alongside existing defensive systems as necessary.[91] Nor was the Athenian regional defensive system foolproof, as particular border passes seem to have remained undefended, and there were even occasions where invading forces managed to sneak into Attica without alerting the border guards.[92] There is also an ongoing debate concerning the ownership of one of these border fortresses at Eleutherai.

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[84] It is important to note that the Athenians were only able to fund the rebuilding of their long walls thanks to donations from Persia. *Xen. Hell*. 4.8.9-10.
[85] Ober 1985, 2, 222; Akrigg 2019, 243; Strauss 1986, 4-5. Note that these scholars do not necessarily embrace the idea but discuss it. The label appears to have mostly fallen out of favour.
[86] Ober 1985, 3, 51.
[87] Ober 1985, 53-55.
[88] Isoc. *On the Peace,* 8.77-8.84.
[89] Ober 1985, 3, 51
[90] Munn 1993, 25; Fachard et al. 2020, 481-2, 528-30.
[91] Fachard 2016, 230. See also Blomley 2022, 112.
[92] Xen. *Hell.* 5.4.20–21); See Fachard (2016, 210) on the issue of border passes remaining undefended. See Friend (2019, 43) on the discussion of Sphodrias evading the Athenian forts.

Where this was identified by Ober, and others, as an Athenian fortress, and a lynchpin of the defensive strategy, thanks to recent research undertaken as part of the Mazi archaeological project, the current seems to be swinging in favour of Boeotian ownership, rather than Athenian,[93] While this does certainly present further problems for Ober's grand theory, it simultaneously highlights that the Boeotians were also investing in regional defences alongside the Athenians during this period. Indeed, this recognition of the importance of securing the countryside was taking place across the breadth of the Greek world, and it is here that we begin to see the innovative fortification methods introduced in the previous chapter, such as self-sufficient regional fortresses and *Geländemauer* circuits, As these changes have been identified in regions as diverse as Messene, Asia Minor, Argos, Eretria, and Sicily, this highlights a change in mentality taking place across the Greek world.

The introduction of the *Ephebia* into Athenian society highlights a number of interesting developments taking place at this time. This was a military training program for the youth of Athens, through which they would be taught a number of military skills, before being sent out into the *chora* to man watchtowers, patrol the region, and deal with outside threats to the city-state.[94] The practicalities of the *Ephebia* were outlined in some detail by Aristotle in the late fourth century, though we also find reference to the idea of border patrols in Aeschines, who notes his own involvement in the practice (or something similar).[95] The date of the *Ephebia's* formal development is debated, though current thinking probably leans towards the latter half of the fourth century.[96] Each of the *ephebes* swore an Oath to defend the city-state and its lands, and more importantly for the purposes of this study, the "wheat, barley, vines, olive-trees, [and] fig-trees."[97] This signals that there was a direct recognition of the importance of the countryside in Athenian strategic thinking, and specifically a promise to defend the crops relating to the food supply and wealth of its populace. Notably, the creation of the oath itself, as well as the involvement of the younger Athenians in military roles, predate the official organisation of the *Ephebia,* and thus the oath could have been sworn by Athenian fighters across the fourth century.[98] Athenian youths had previously served in the home guard, alongside aged fighters, to defend Attica's borders during the Peloponnesian War, and we likewise find references to border patrols before the official creation of the *Ephebia*, as in Aeschines above.[99] Ober had incorporated these border guards into his grand Fortress Attica theory, though Friend argues the *ephebes* were more likely to have fought bandits than invading armies.[100] Either way, ongoing developments in homeland defence grant further

[93] Fachard et al. 2020, 487, 528-30.
[94] Friend 2019, 12.
[95] Arist. [*Ath. Pol.*] 42; Aeschin. *On the Embassy*, 2.167. Scholars have used the dating from Aeschines' *In Tim.* 1.49 to argue for the e*phebia* in the first half of the fourth century. This seems to have been a separate, less codified version, however.
[96] Friend 2019, 33-5; Ober 1985, 91.
[97] The Oath of Plataea, no. 88, ll. 5–20. In Friend 2019, 19.
[98] Arist. [*Ath. Pol.*]. 42.
[99] Friend 2019, 28.
[100] Ober 1985, 96; Friend 2019, 44, 81.

credence to the idea that Athens gained a newfound recognition of the importance of keeping foes from reaching the countryside. The codification of military training was also new to Athens and appears linked with the growing professionalisation of city-state armies that was happening at this time.[101]

It was not just the city-states that took steps to improve security, however, and one of the more notable developments we see at this time was the widespread investment into personal fortifications. These typically took the form of the fortified towers examined in the previous chapter. Being quite expensive investments, these towers were limited to wealthier citizens. Morris and Papadopolous have estimated the cost of a tower to be upwards of 8000 drachmae, and unlike the public fortifications funded by a mix of required and voluntary taxes or donations, the costs paid for these private fortifications were likely to have been wholly funded by the individual.[102] This expense would likely have been in addition to any war taxes or military liturgies owed by the individual. The frequency with which we find these towers demonstrates that many were willing to bear the costs, suggesting that security in the *chora* was a concern. Outside of war, these towers could serve as protection against more common threats, such as wild animals or bandits. This is attested in a passage of Demosthenes, which demonstrates the successful use of the structure against a group of thugs who made an unexpected assault upon a family.[103] A sturdy door and stone structure were enough to prevent entry to thieves, and these farm towers also served as a secure area both for storing goods or containing enslaved individuals so that they were unable to flee.[104] These fortified structures would likely have proven far less sturdy against a concerted siege effort though. A passage from Plutarch's *Life of Eumenes* appears relevant here, in which Eumenes reportedly auctioned off to mercenaries the rights to the booty inside the fortified towers that had fallen under his control. He even provided the buyers the siege equipment, probably battering rams, needed to break them open.[105] Excavations support the idea that these structures typically would not have been able to stand strong against proper siege equipment, though finds from the Chersonese region suggest that the structures could be modified with anti-battering ram bases.[106] Most towers found on the Greek mainland do not have these bases however, and thus their effectiveness during an occupation of the countryside is uncertain. While they may have proved too sturdy for the less-well equipped bands of raiders who undertook much of the ravaging of the *chora,* they also signalled to raiders that something valuable might lay within. Thus, rather than deterring raiders, these structures might have attracted them, and given enough time, the raiders would likely find or create some means of breaking into these structures.[107] Because of this, it is unlikely that towers were able to serve as a

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[101] Friend 2019, 77.
[102] Morris and Papadopolous 2005, 164.
[103] Dem. 47.56.
[104] McHugh 2017, 65-71; Morris and Papadopoulos 2005, 189–190.
[105] Plut. *Vit. Eum.* 8.
[106] Saprykin 1994, 71.
[107] Hanson 1998, 51; Thorne 2001, 241-42.

place of refuge during an invasion, and were better suited to hindering bandits, preventing opportunistic thievery, or securing enslaved workers.[108]

The deprivation suffered by the Athenian people during the darkest days of the siege also appears to have driven them to become less reliant on imports, which were demonstrated to be susceptible to blockade, and to instead devote more of their own farmland to cereals.[109] This is supported by the palynological data introduced in Chapter One, which demonstrated that farmers shifted their behaviour in this post-war period. Where these farmers previously favoured export crops, many now seem to have been turning to grain instead.[110] The lengthy period it took for olives and other fruit trees to reach maturity would have been agonising in the post-siege economic decline, as they yielded no income in this intermediate period. Perhaps because of their quicker growth, grains thus seem to have been viewed as a more important crop than olives or wine in times of crisis. The upwards trend on cereal growth continued until the early third century BCE, and yet despite the steady increases to grain production over the course of the fourth century, the Athenians seem to have been unable to completely shake their reliance on imports.[111] Data drawn from 329/8 reveals that Athens produced nowhere near enough food internally to feed all of its people, and still turned to imports to make up this difference.[112]

Whether these developments proved effective or ineffective in the long-term is of little consequence for the purpose of this study. What is important is the intentions behind those responsible for the decision making at the time, and the influences behind those decisions. I suggest the anxieties surrounding security felt by much of the populace following the occupation and siege of Athens played a significant role in the willingness to fortify new areas of the city-state, enact new military practices, such as the *Ephebia,* and devote more of their farmland to subsistence crops. Of course, the siege was not the only factor at play in this decision making, and the Athenians were at the same time adapting to the loss of their empire, a changing military environment in Greece, and the rise of new regional powers. Yet because the consequences of siege warfare remained visible in the landscape, in the form of ruins and other remnants of war, a siege was unlikely to have been easily forgotten. In the next chapter I turn to the question of memory, exploring how the physical landscape, and the scars it bore, kept the memory of these sieges close at hand for many Greek individuals.

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[108] Osborne 1987, 77-79.
[109] See Xen. *Hell*. 2.2.5, 5.3.18, 6.28; Diod. Sic. 13.107.1.
[110] Izdebski *et al*. 2020, 2604.
[111] Izdebski *et al*. 2020, 2604.
[112] Garnsey 1988, 99.

Chapter Five: Remembering the Siege through the Physical Landscape

In the last chapter I explored how individual and city-state level decision-making might have been influenced as a result of being subjected to a siege. Among the Athenians, this appears to have taken the form of a more conservative mindset, or "defensive mentality."[1] In this chapter I argue that the transformation of the physical landscape that arose out of siege warfare played a role in developing and fostering this mindset. This chapter will explore the connection between this transformed landscape and the way in which the siege that caused this transformation was remembered, both in terms of individual memory, as well as in the collective memory. To that end I evaluate a number of 'sites of memory,' that were developed, or recognised, in the aftermath of particular sieges. These commemorative spaces did not exist in isolation from one another, nor from the other elements of the landscape, however, but constituted just one (important) part of the multi-vocal Greek landscape. Because I cannot hope to explore every aspect of what I term memoryscapes in this study, I have elected to focus my examination on the concept of trauma, which I identify as particularly relevant following siege warfare. In the second half of this chapter, I examine the difficulties faced by those seeking to identify instances of trauma in an ancient context and suggest we might be better served envisioning post-siege landscapes as traumascapes. I conclude by demonstrating how living amongst, or simply encountering a traumascape, may have shaped an individual's perceptions of a particular siege, and thereby influenced their state of mind and future decision making.

Introducing the Remnants of Warfare and Sites of Memory

Throughout this study I have identified numerous physical remnants of war that continued to occupy the landscape following a siege. These remnants could take the form of objects, such as discarded siege weaponry, abandoned arms and armour, or even the corpses of fallen soldiers. They could likewise take the form of ruins, ranging from the vestiges of siege camps and encircling ramparts, to destroyed farmhouses and damaged processing sites. Even though the siege itself had concluded, these places and artefacts served as physical reminders of the warfare that had occurred in the space and demonstrated the very real consequences of the siege upon the landscape. The burden, or on occasion, opportunity, of managing these remains usually fell upon those seeking to occupy the space, whether they were the original inhabitants or the besiegers who conquered the territory. While many of the structures would have been torn down, much of the equipment gathered, and the corpses buried or cremated, other remnants might have remained in the landscape for months, years, decades, or even centuries. This occurred both in situation where the remnants were too unwieldy to dismantle or were recognised as having value as a commemorative symbol. I suggest that given the right conditions, any of these

[1] Ober 1985, 3.

physical remnants could be transformed into a site of memory, as might also a range of intangible or symbolic vestiges of the siege.[2]

The notion of the site of memory ("*lieu de mémoire*") was first conceived of in the 1980s by Pierre Nora, who used the term to refer to places, objects and symbols that played a role in creating a collective French identity or heritage.[3] In my usage of the term, sites of memory may be conceived of as places, objects and symbols connected with a particular historical event, that hold significant historical meaning to a particular community, culture, or individual. These sites both bear memories of a particular event, as well as transmit these memories, in a sense, to those who engage with the site, potentially propagating these memories across a wider community and even through time. Sites of memory may inherit new meanings over time, as the event connected with the site is reconceived by later generations, or be abandoned entirely, depending on the needs and actions of the individuals or communities who engage with the site. Since Nora's foundational work, the concept has been widely adopted by scholars working in a variety of different fields, though as a consequence of such widespread adoption, the terminology and application of these ideas can fluctuate wildly between studies, as scholars mould the ideas to fit different contexts.[4] For many, sites of memory are viewed only as collective in nature, requiring a communal response to classify them as sites of memory, while others accept that the sites may be more private or individual.[5] Winter notes the two main approaches scholars take when examining the way sites of memory are created and managed. The first view explores sites of memory as essentially top-down instruments of control, through which a dominant political power might direct the historical narrative, or more maliciously, manipulate the masses.[6] Another approach is to look at those sites of memory formed by the community to meet a particular commemorative need, without requiring input from, or coming under the influence of, those in power.[7] Both of these approaches, top-down and bottom-up, can be identified in an ancient context. Alongside these I identify a third type of site of memory. These are spaces which were scarred or transformed in the course of warfare, and while not organised in an official capacity, may still have been able to trigger, even unconsciously, recollections of the event in the mind of witnesses.[8] Throughout this section I introduce a number of different types of sites of memory connected with sieges, ranging from battlefield monuments and public funerary orations to private shrines, artefacts collected from the battlefield, and even to the commonplace farmhouses and fields ravaged during the conflict.

The concept of the site of memory is not the only approach that scholars have taken to examine how space and memory correlate. While I have elected to principally draw upon the terminology of memory

[2] Cf. Makins 2021, 131.
[3] Nora 1993, xv.
[4] Thomas, 2019, 22; Van Dyke 2006, 209-211.
[5] Arrington 2015, 222-230.
[6] Winter 2010, 315-16; Rowlands and Tilley 2006, 502.
[7] Winter 2010, 316-17.
[8] Sendyka 2016, 694, 699.

studies, I also explore a range of other conceptual frameworks and ideas in my examination, particularly the work of landscape archaeologists and theorists. I suggest these concepts synthesise well with the ideas discussed in this chapter, while providing a great deal more nuance and a number of alternate viewpoints from which to examine the issues. The non-human focus of many of these theories offers a valuable counterpoint to the idea that remembrance is solely a wilful human process.[9] Pétursdóttir and Olsen note that ruins or other mementos are themselves born out of conflict, and thus innately possess memories of the event woven into their very form. [10] The form of a ruined tower is constituted by the bomb that damaged it, for example, and this remains true even if there were no human observers to witness the event. In this line of thinking, when human observers witness these ruins, and the memories woven into them, they grant them meanings that fit their own worldview and historical understanding, but this may not accurately reflect the meanings placed upon the site by earlier observers, nor the same understanding of the past as 'experienced' by the ruin itself.[11]

Exploring the Sites of Memory that Originated from Siege Warfare

Even if the Greeks were not using the same terms that we use today, it is clear that they were familiar with the importance of commemoration following battle. Trophies had long been employed in Greek warfare by the time of the Classical period, and these monuments served to mark the sites of turning points on the battlefield which led to their side's victory.[12] Trophies do not seem to have been employed to mark the ultimate siege victory in the same manner as battlefield victories, though there are several examples of trophies being erected following skirmishes between a besieging force and the besieged.[13] The trophy seems to have been most commonly constituted by a type of wooden mannequin, decorated with the arms and armour of defeated foes, though at some point, the Greeks started to make more permanent versions of these trophies out of stone.[14] While trophies made from wooden material would have decayed relatively quickly, stone constructions could remain in the landscape for a much longer period. Indeed, this exact issue is commented on in Diodorus Siculus' account of a debate held by the Syracusans concerning what to do with their Athenian prisoners after the siege of Syracuse. Nicolaus, who seeks the release of the prisoners, asks "was [the use of wood in trophies] not in order that the memorials of the enmity, lasting as they would for a brief time, quickly disappear".[15] In an interesting parallel, Diodorus further reports that during this debate the Spartan Gylippus argued that unless the Syracusans wanted the Athenian prisoners to serve as "living trophies" of the departed, they had to be killed.[16] Now whether such a debate happened in reality, and in such terms, is of course contentious.

[9] Pétursdóttir & Olsen 2014, 8-9.
[10] Pétursdóttir & Olsen 2014, 10.
[11] Thomas 2012, 108-9.
[12] Kinnee 2018, 7, 35.
[13] See Xen. *Hell.* 3.5.18, 7.4.14; Thuc. 5.3.4, 6.100, 103, 7.72. for some of the numerous examples.
[14] Kinnee 2018, 37, 50.
[15] Diod. Sic. 13.24.5-6.
[16] Diod. Sic. 13.29.2-3.

The very fact that Diodorus was using such language does highlight that such concerns were considered in an ancient context, however.[17]

Alongside trophies we find a range of other memorials following battles to mark the site of the fallen.[18] The most famous of these sites is probably the mound at Marathon, which served as a mass grave for the Athenians who fell in battle against the Persian invaders.[19] For the most part, it is generally understood that trophies, commemorative monuments, and tombs fell under the same *asylia* as the sanctuaries described earlier, and were thus unable to be disrupted or removed without incurring the ire of the gods.[20] Greek city-states could thus find themselves playing host to monuments marking their defeat in their own territory, yet unable to remove these symbols of their defeat from public view. Vitruvius reports that the Rhodians had a trophy marking their defeat built within their city itself, yet were unable to remove this mark of shame, and thus resolved to disguise it.[21] The Thebans likewise played host to the graves of fallen Spartan warriors located just outside of Thebes, while a monument marking the burial site of the fallen Theban general Epaminondas was placed in the territory of his former enemies.[22] These trophies and monuments held direct links with important historical events, and yet, because they were located in foreign lands, they were likely beyond the reach of the city-state's citizens who wanted to participate in honouring or commemorating the fallen.[23] City-states therefore installed more accessible memorials within their own borders and hosted a number of commemorative activities for this purpose. The public cemeteries of Athens for example served as an important commemorative site for the city-state and served as the burial site of bones and ashes collected from those who fell fighting for the city-state.[24] In addition to carrying out public burials, the public cemeteries displayed memorials, bore lists of the fallen, and hosted important commemorative activities such as the funeral orations, discussed below.[25] The function of these public sites of memory were thus very different from the trophies, whose principal audience seems to have been deities rather than fellow citizens.[26]

[17] Thuc. 7.86-7 does suggest that the Syracusans did execute a number of these captured prisoners of war, while many more died toiling in the quarries. Yet many others were kept alive, though enslaved, suggesting that the Syracusans in power were not overly concerned about this notion of "living trophies."
[18] While I focus on monuments marking land-based battles in this discussion, van Rookhuijzen (2021, 213-14, 221) reminds us that naval battles were likewise commemorated by physical monuments.
[19] Thuc. 2.34.5; Duffy, 2018, 56-59.
[20] Kinnee 2018, 27; Duffy 2018, 33. Thuc. 8.24.1. does suggest that trophies might be pulled down if there was debate over their validity.
[21] Vitr. 2.8.15.
[22] Paus. 8.11.6-8; Diod. Sic 15.52.5.
[23] Minchin (2012, 79-80; 2016, 257, 264-68) demonstrates that the burial mounds and tombs of famous figures would later become pilgrimage destinations for visitors across the historical eras, and thereby continued to propagate knowledge of the fallen and the circumstances of their death in the collective memory of later peoples.
[24] Arrington 2015, 34-5; Clairmont 1981 132-4.
[25] Duffy 2018, 10-12; Arrington 2015, 91-5.
[26] Kinnee 2018, 37,39.

Mementos collected from the battlefield could also become sites of memory. Following the successful siege defence at Syracuse, the most prominent pieces of the Athenian armour and weaponry picked up by the Syracusans were put on display in local temples.[27] One of the more notable items on display was a shield reportedly belonging to the Athenian commander Nicias, which Plutarch suggested was still viewable in his own time some five centuries later, highlighting that it was not only the memory of the event that was long enduring, but also its physical remnants.[28] By placing these artefacts on display, rather than keeping them locked away in a treasury, the objects could be put to use, reminding the public of their achievement in repelling the siege, and their overcoming of the Athenian forces. Viewing a battered shield or an Athenian trinket from the battlefield might have created a stronger connection to the event among witnesses than a story or text alone. Following the 1992-1996 siege of Sarajevo, Maček highlights how some individuals, particularly from later generations, found it hard to build an understanding of the siege from stories or recollected accounts alone.[29] It was only through witnessing the bullet holes that remained in the asphalt and buildings of the city that they could begin to envision the actuality of the conflict, and the experiences of the survivors. In displaying these artefacts to the public, these temples thus acted in a similar way to museums today, and likely played an important role in teaching succeeding generations of the siege.[30] We find similar treatment of captured artefacts in the city of Athens also. A number of captured Spartan shields from the siege at Pylos were reportedly displayed publicly in the painted stoa, and perhaps also in the Temple of Nike (See Figure 8).[31] These artefacts were still on display during Pausanias' visit to the city in the second century CE, and one extant example was excavated in the Athenian Agora.[32] It is important to note that when these temples incorporated new artefacts, they did not suddenly lose any pre-existing associations or connections with other events. In a later example, the Rhodians, following a successful defence of their besieged city in 305, found that the besieging army had abandoned their siege weapons during their retreat, including the massive siege tower known as the *helepolis*, or city taker. We are told that the Rhodians then brought this massive weapon into their city and placed it on public display as a "spoil of war".[33] Few would have been unable to appreciate the achievement of the Rhodians in overcoming such a terrifying weapon, and its noticeable presence in the city must have emboldened the populace to resist future invasions. Pliny the Elder further suggests that the three-hundred talents required to construct the Colossus of

[27] Diod. Sic. 13.34.5-6.
[28] Plut. *Vit. Nic*. 28.
[29] Maček 2018, 19-20.
[30] Violi 2012, 39; Winter 2006, 222-24; 232-33.
[31] The shields in the Stoa are referenced in Paus. 1.15.5. The temple of Nike is less certain, though references in Aristophanes K*nights* (843-59), and the discovery of places in the temple in which these shields may have been displayed has convinced Lippman, Scahill and Schultz 2006, 551-554.
[32] Paus. 1.15.5: Shear 1937, 347-348.
[33] Vitr. *De Arch.* 10.16.8.

Rhodes were raised via the sale of Demetrius' captured war machines, creating a link between the siege and one of the ancient world's most famous monuments.[34]

Figure 8: Spartan shield excavated from the Athenian agora by Shear and his team. The inscription reads ΑΘΗΝΑΙΟΙ Ι ΑΠΟΛΑΚΕΛ Ι ΑΙΜ[ΟΝ]ΙΩΝ Ι ΕΚ[ΠΥ]ΛΟ marking that it was captured during the fighting at Pylos. (From Shear 1937, 346-8 and Lippman et al. 2006

In addition to these tangible sites and artefacts that could serve as historical reminders, symbolic sites of memory likewise played a key role in commemorating past sieges. Following a notable siege victory, the relieved populace often engaged in great celebrations, honouring the efforts of the besieged populace and the achievements of notable military commanders. After the victory at Syracuse for example, it seems that one of the Syracusan leaders proposed to create a new festival, the *Asinaria,* to celebrate the capture of Nicias.[35] This festival is not attested elsewhere however, nor mentioned in Thucydides account, leaving it unclear whether the proposal was accepted and whether the festival continued to be celebrated in the years to come.[36] Similarly, Lysander was celebrated in many cities for his role as a siege-breaker at the end of the Peloponnesian War. In one instance, the citizens of Samos, rather than creating an entirely new festival dedicated to Lysander, reportedly renamed their existing festival to Hera as the *Lysandreia* in his honour.[37] Beck-Schachter suggests that the Samians made this change to symbolise a re-establishment of Samian society, following a number of earlier political disruptions, with Lysander taking on a role similar to that of a city founder *(oikistes*).[38] These celebratory days were

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[34] Plin. *HN*. 34.18.
[35] Plut. *Vit. Nic*. 28.
[36] Fine (1983, 497) notes the unique coins connected to the Asinaria, while Titchener (1988, 409) seems to accept Plutarch's account on historiographical grounds, noting that Pausanias explicitly cites the historians Timaeus and Philistus for this section.
[37] Plut. *Vit. Lys*. 18.
[38] Beck-Schachter 2016, 107-110. The Spartan commander Brasidas appears to serve as another example of this situation. Thucydides (5.10) reports the commander was buried in Amphipolis, after he succumbed to wounds earned defending the city from the Athenians. The Amphipolitans reportedly buried Brasidas with state honours, held yearly contests in his honour and treated him as a city-founder. Simonton (2018, 4-5, 10) provides further discussion of the 'hero-cult' that arose around Brasidas in Amphipolis.

specifically set apart for commemoration and served to create a sense of shared identity and traditions within a populace.[39] Much as with the placement of new artefacts into existing sites of memory, by merging a new event with pre-existing traditions, the commemorated siege must have been more easily cemented into the collective memory of the community.[40] Because anniversaries were engaged with in a specific manner and formed part of the city-states' official calendar, the commemorated events would have been far less easily forgotten.

Not all commemorative events dedicated to warfare were strictly celebrations however, and we find a host of more sombre memorials honouring the sacrifices of the fallen. The most famous of these is undoubtedly the Athenian funeral orations, the e*pitaphios*. These annual addresses were performed by a prominent member of the city-state and served as a means of commemorating the soldiers who fell fighting for Athens, while simultaneously strengthening the collective identity of the Athenian people.[41] The most famous example today is undoubtedly the speech delivered by Pericles, thanks to its eloquent portrayal in Thucydides, though we have additional examples attributed to Lysias, Demosthenes and Hypereides from the fourth century.[42] As Shear notes, the orations all tend to follow a fairly set pattern, while still allowing the idiosyncrasies of each speaker to shine through.[43] Being experienced speakers, the orators seem to employ an array of rhetoric and appeals in order to achieve the right level of solemnity, or perhaps even shame the people into action, without causing the audience to become mired in anger, sorrow, or despair. Nor was the intended audience merely the fighting classes, but also the women and children of Athens, who would respectively raise, or grow up to be, the future defenders of the city-state.[44] Thus, the tone of these funeral orations are not despairing, but rather focused on espousing the merits and achievements of the city-state. Delivered in the early days of the Peloponnesian War, Thucydides' Pericles details the glorious struggle of the Athenians against their enemies, attempting to galvanise the populace for coming conflicts. It is of course impossible to determine how closely the speech in Thucydides was likely to have matched the actual speech delivered by Pericles in 431/30, though many scholars, including Loraux and Bosworth are convinced that the tone and outline are likely to be accurate.[45] Something akin to propaganda was certainly one aspect of these funeral orations, but as Steinbock notes, there was also much more at play, and these speeches played an integral role in creating a shared historical understanding among the Athenians, as will be explored further in the case study below.[46]

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[39] Chaniotis 2005, 227-33.
[40] Chaniotis 2005, 230.
[41] Shear 2013, 511; Steinbock 2013, 77.
[42] Thuc. 2.34-46; Lysias 2, Demosthenes, 60, Hypereides, 6.
[43] Shear 2013, 512, 528-30.
[44] Arrington 2015, 109; Shear 2013, 521, 526
[45] Hornblower 1991, 295; Loraux 1986, 191-2; Bosworth 2000, 1-2
[46] Steinbock 2012 ,40, 51; 2013 73. Note that Steinbock disagrees with the use of the term propaganda in this ancient context, as it is not always clear how much of the city-state's history the speakers actually understood themselves, nor can we prove that they were wilfully misrepresenting the past to some end.

The funeral orations serve as a good example of the way that sites of memory could be used by those in power to shape the collective memory of particular events.[47] In fact all of the sites of memory that we have examined up to this point were all officially organised or recognised by individuals or institutions in positions of power, whether generals, temples, or political leaders..[48] In Euripides' *Hecuba,* Odysseus suggests that the self-interested would not sign up for wars if those who were killed "received no special honour", and that many only signed up because they would receive a "tomb" that "men gaze at reverently".[49] By controlling the sites, objects, and events linked with commemoration, as well as the textual record, which played a major role in constituting cultural memory, the dominant powers could attempt to control the narrative of these wars, and the way that they were remembered among the populace.[50] This cultural memory refers to the recording and re-recording of historical events within a particular culture's literature, which would have assisted in maintaining memory and knowledge of these sieges down through the ages, even to audiences that had no personal experiences with the event in question.[51] As Rosalind Thomas notes however, the cultural memory of a peoples was particularly susceptible to being controlled, as literature was an activity accessible to few among the wider populace, and therefore knowledge of the event among later generations could be manipulated, unbeknownst to many.[52]

Not all sites of memory were susceptible to such control however, and there were a range of private or personal sites of memory established by individuals or smaller communities across the city-state. At some point in the fifth century, there seem to have been laws introduced in Athens to prevent the creation of private memorials for fallen soldiers, as the city appears to have tried to downplay notions of individual heroism, in favour of commemorating the fallen as a noble, unified collective.[53] Despite this, we find a range of private shrines established cross the Attic landscape, as families honoured their fallen sons, fathers, and husbands.[54] These shrines often mimicked the iconography and designs of the public memorials but were primarily organised by and for the use of a private group of citizens who could dictate the terms of the commemoration themselves.[55] The grave stele of Dexileos, excavated in 1863, provides the best known extant example of this type of private monument (see Figure 9). The fourth-century stele depicting this fallen cavalryman notably appears to have copied a pre-existing motif

[47] Winter 2010, 315.
[48] Arrington 2015, 112-13.
[49] Eur. *Hec.* 313-324.
[50] Assmann 2011, 6-7; Thomas 2019, 23. Connerton (2006, 319- 322) highlights another incredibly important aspect of memory, which is forgetting. By controlling what is forgotten, those in power may rewrite history to meet their own ends.
[51] Assmann 2011, 8.
[52] Thomas 2019, 23; Assmann 2011, 9-10.
[53] Arrington 2015, 205.
[54] See for example the grave relief for Chairedemos and Lykeas, found on Salamis, or the Albani relief found in Chalandri, north of Athens. For discussion, see Arrington 2015, 223, 230.
[55] Arrington 2015, 205, 236.

Figure 9: The Stele of Dexileos (From Hurwit 2007, 39)

featured in public memorials in Athens.[56] This is an example of a bottom-up approach to commemoration, where a group or community take it upon themselves to meet a particular commemorative need that they feel was not being met by existing sites of memory. These individuals thus created their own sites of memory, often physically nearby, which could be controlled or managed at their discretion and better facilitated their own needs or wishes.[57]

There were also landmarks that became connected with a siege not through any official designation, but rather through their physical connection to a particular event. Diodorus Siculus records that the incomplete Temple of Zeus, located outside the city of Acragas, in Sicily, which was probably constructed to celebrate victory in the Battle of Himera (480), instead became associated with the 408 siege of Acragas which resulted in the city's destruction.[58] As the city was placed under siege before the Acragantini could place the roof on the structure, the temple remained unfinished.[59] The massive, yet glaringly incomplete temple thus simultaneously served as both unofficial memorial to the massacred Acragantini as well as a victory monument for the Carthaginian besiegers. Less noteworthy sites could also become associated with particular sieges, as we find with the spring of Phana in Aetolia. In normal times, this fairly unremarkable spring probably played a minor role in supplying water to the nearby city, yet this spring is known to history for the role it played in the mostly unknown siege of Phana.[60] Thanks to an oracular verse that featured in the story, both the spring and the siege entered into the literary record, and could thus appear in Pausanias' *Guide to Greece* written many centuries after the event. Neither of these sites played host to the official commemorative activities that we find elsewhere, and yet they clearly held strong resonance with particular events, at least in the cultural memory. It is unclear, however, whether such knowledge was widely accessible, or limited to those literati like Pausanias with a motivated interest in rediscovering the Greek past.[61] The sanctuaries damaged by the Persians discussed in Chapter Three serve as an even stronger example. These similarly became sites of memory through the physical damage wrought upon them. While all of these spaces were physically connected with sieges, it was through the cultural memory that this understanding was transmitted. As we have explored with the Oath of Plataea in Chapter Three, the narrative through which the sanctuaries were connected to the Persian invasion does not always seem to have been historically accurate, yet this did not stop those in power from using the sites to further their own agendas. Unlike the unfinished temple at Acragas, many of these sanctuaries seem to have continued to operate as before, and their association with the events of the Persian Wars formed just one of the many commemorative facets of these sanctuaries.[62] Pausanias reports that one sanctuary, near the city of Abae, was burned

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[56] Hurwit 2007, 38-41; Arrington 2015, 206.
[57] Winter 2010, 316-7.
[58] Diod. Sic. 13.82.1: Rykwert 1996, 131.
[59] Diod. Sic. 13.82.3-4: Holloway 2000, 151-53; Rykwert 1996, 131.
[60] Paus. 10.18.2.
[61] Anderson 1993, 4; Strazdins 2023, 1-3, 18.
[62] Miles 2014, 139; Camp 2001, 126.

both by the Persians in 480, and then again by the Thebans during the Phokian war of the mid-fourth century.[63] This sanctuary thus held two simultaneous connections with different destructive events.[64]

Alongside the monumental sanctuaries and temples, a multitude of commonplace spaces bore physical scars of the ravaging that accompanied siege warfare, whether in the form of farmhouses, barns, olive presses, fields, groves, olive trees, or countless other examples.[65] When these places and objects were damaged, burned, or looted during the course of an occupation, they physically became inscribed with the memory of the event, no different from any other of the sites of memory previously examined. There is little reason witnessing a burned farmhouse, damaged olive tree, or trampled field could not have resulted in the same transportive effect as witnessing any other site of memory might, particularly among those with some attachment to the modified space. Simply stumbling upon the ruins of a barn that was never repaired even years after the war might have forced an affective response from an individual, forcing a personal recollection of the events that led to its destruction.[66] Sendyka refers to such spaces as “places that haunt”, and suggests that they can often cause a sense of unease among those with a connection to the space.[67] Where many of the sites of memory previously examined, such as annual festivals or public cemeteries, seem to have been designed around communal commemoration, I suggest that these everyday sites were more likely to have been associated with individual, spontaneous, and perhaps even unintentional, commemoration. Because these sites were in many instances completely unorganised, and only engaged with incidentally, rather than in pre-planned ways, controlling the narrative of these spaces would have been far more difficult. We may also understand these places as having wider symbolic resonance. While a specific damaged olive tree or scarred farmhouse in Rhamnous, for example, might have had little affective resonance among the wider Athenian populace, many individuals within Attica may have been aware of similarly destroyed spaces or objects that they themselves encountered in the course of their daily activities. Those living in areas with no lingering signs of destruction were therefore at a remove from these ad-hoc sites of memory and may therefore have had a different understanding of the event that led to their destruction. Ultimately, I suggest that the symbolic idea of a burned tree or a trampled field became recognised as a site of memory, with each distinct instance of destruction found in the landscape bolstering this symbolic idea and serving to propagate the memory of the event more widely throughout a city-state.

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[63] Paus. 10.35.2.

[64] Paus. 10.35.4 reports that “this most ramshackle building that flames ever ruined” was still standing at the site when he purports to have ventured there in the second century CE.

[65] Note that I am referring here to the unnamed trees found across the landscape, rather than the very specific memorial or named trees connected with particular folklore or historical events that could be encountered in sanctuaries or settlements. For more on these see Birge 1994, 234.

[66] Tumarkin 2019, 5; Sendyka 2016, 688.

[67] Sendyka 2016. These “non-sites of memory” still have important affective power but may not have kept their physical presence.

Defining Memoryscapes and Traumascapes

While in the last section I examined a range of sites of memory individually, in reality each site did not exist in isolation, but formed a part of an extensive pre-existing landscape filled with the functioning cities, towns, farmhouses, fortifications, forests, and mountains of the Greek world.[68] These landscapes were not merely commemorative spaces, but structured spaces in which individuals also made their homes, worked, held festivals, and worshipped their gods.[69] The commemorative sites of memory we have discussed were interwoven into this functional landscape, forming what I refer to as a memoryscape, which served to connect individuals with the past even as they went about their daily lives. This is not a new idea within the scholarship, and has been explored under many different guises, such as ‘landscapes of war’, ‘landscapes of memory’ or ‘memorial landscapes’[70] These terms share a number of similar, often overlapping ideas, and should not therefore be seen as wholly distinct from one another, but a consequence of the flexible terminology used in this space.[71] The scarred landscapes following warfare did not only invite a single response, but should be considered multi-vocal spaces, able to convey a range of ideas and senses to those living amongst or moving through them.[72] In the wake of a siege some may have encountered this scarred landscape and dwelt in despair, unable to look past the ruins of their former home and the loss of family members. Another may have felt a surge of pride from the knowledge that even though they had sacrificed much, they had managed to repel those who invaded their homeland. Others still may have been moved to anger, raging at their helplessness to protect their property, and seeking revenge against those that stole their wealth and ruined their livelihood. All of these responses might have been felt by different individuals at the same time, or by the same individual at different times. Nor was one limited to simply feeling one emotion, and warfare often leaves affected individuals trying to come to terms with a range of complex feelings and thoughts.[73] I could not possibly hope to explore all of these aspects in this study, and so have chosen to focus upon the notion of trauma following a siege, exploring how these modified landscapes might have come to resemble a traumascape for Greek individuals.

Applying the modern concept of trauma in an ancient context is a task fraught with difficulty. As Tumarkin notes, trauma has its roots in the fields of medicine and psychiatry, though its usage by scholars has often been expanded to incorporate a range of alternative ideas and mean a variety of different things.[74] One commonality that is generally agreed upon is that traumas stem from experiencing psychologically unsettling events “outside of the range of normal human experience”, and

[68] Thomas 2012, 99.
[69] Bender 2006, 306; Yates 2019, 188.
[70] Árvay and Foote, 2019, 129; Maus 2015, 217-8; Thomas 2012, 99; Makins & Reitz-Joosse 2021, 3.
[71] Van Dyke 2006, 213-214.
[72] Chaniotis 2005, 1; Winter 2010, 317.
[73] Crowley 2014, 108-9.
[74] Tumarkin 2019, 14.

the horrors that could occur during ancient sieges surely fall under this category.[75] Cannibalism, near-starvation, ongoing periods of dread, desperate combat, and feelings of extreme helplessness would likely all be classified as beyond normal experiences. Not all who lived through ancient sieges should be classified as traumatised by their experiences, just as many modern soldiers make it through a war without succumbing to trauma.[76] The greatest challenge when it comes to applying trauma to an ancient context is the diagnosis of specific individuals or symptoms. Some, like Crowley, argue it cannot be done, as the cultural differences between ancient Greeks and modern soldiers are too vast.[77] This has not stopped scholars from trying however, and Ustinova and Cardena, for example, have identified similarities between modern combat traumas and some of the recorded experiences of soldiers from the ancient world.[78] Shay, meanwhile, turned to ancient literature for his parallels, heavily drawing on examples of combat trauma he identified within the works of Homer.[79] While these scholarly works do point to specific ideas in ancient texts that might correlate with modern symptoms of Post-Traumatic Stress Disorder (PTSD) or combat trauma, attempts to retrodiagnose specific individuals or cases from such a limited data set are not always convincing. Steinbeck instead suggests that PTSD is a modern phenomenon, and quite specific in its definition, and should probably therefore be sidelined when thinking about the ancient world. He prefers instead the more generic "combat trauma," as it is more applicable to the limited ancient evidence we have.[80] Like Steinbeck, Hau views Thucydides' recording of the Sicilian expedition as a reliable account of the traumas experienced by Athenian and Syracusan soldiers.[81]

Jo Stanley suggests that combat traumas act as a form of involuntary commemoration.[82] For those afflicted, remembrance is often forced upon them by their trauma, and they cannot help but replay memories of the event in their minds. This involuntary remembrance can be caused by a range of triggers, which might take the form of sounds, particular imagery, or a physical place encountered by the individual. Hau notes that Thucydides' emotional description of the Athenian army's retreat from Syracuse was deliberately written in a different manner than his accounts of other battles.[83] In this passage Thucydides emphasises the sights and sounds of dying comrades that the Athenian force were subjected to.[84] Thucydides notes the helplessness (*aporia*) of the soldiers, and the self-blame they placed upon themselves, which Steinbeck recognises as survivor's guilt.[85] Thucydides was, however,

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[75] Stanley 2000, 242.
[76] Ustinova and Cardeña 2014, 740.
[77] Crowley 2014, 115-116.
[78] Ustinova and Cardeña 2014, 740, 745.
[79] Shay 1994, 2002.
[80] Steinbeck 2020, 95.
[81] Hau 2020, 136-7.
[82] Stanley 2000, 240.
[83] Hau 2020, 143-4.
[84] Thuc. 7.75.
[85] Thuc. 7.75: Steinbeck 2020, 109.

not at this battle, and based his accounts on information picked up elsewhere.[86] If this was the description of events told to him by Athenian survivors, then the vividness of the memories in their minds might speak to their ongoing personal traumas. It is unknown whether any of the Athenian survivors returned to Syracuse in the years after the expedition, and we are left to imagine how they might have reacted to the site of such a terrifying experience. In the case of sieges, there was often far less distance between the site of the traumatic experience and the area in which an individual carried out their daily life. The very space that served as one's home might have suddenly become a traumatic space, triggering painful reminders of their losses or firsthand experience of being besieged. Rather than focusing on diagnosing individual cases of combat trauma, however, I suggest we instead think about the spaces in which sieges or battles took place through the lens of a traumascape.

One of the benefits of thinking about traumascapes is that we can dispel the need to diagnose individual cases of trauma. The term traumascape was coined by Maria Tumarkin to refer to places not simply where trauma arose, but where traumatic experiences led to an ongoing process of mourning, meaning making and commemoration that then resulted in the constitution or re-constitution of the space as something distinct from what came before.[87] These spaces have some hold over the human psyche, attracting individuals, both connected and unconnected to the traumatic event, to experience the transformed space. Not everyone who moves through a traumascape and feels an affective response need be clinically diagnosed with a traumatic condition, however. Just as Tumarkin classifies the city of Sarajevo (following the modern siege of 1992-96) as a traumascape, I suggest that we might similarly classify many of the sites of ancient sieges as traumascapes. The besieged in both cases were exposed to battle, to death, to extreme deprivation, to terror, to despair, and a host of other potential consequences that accompany siege warfare.[88] In the aftermath of these events, people continued to occupy these spaces, and we find a process of meaning-making taking place. The commemorative monuments and rituals, both public and private, that were created in the aftermath of each of these events provide insight into the way that individuals and communities were trying to come to terms with their grief and make historical sense of their experience.[89] Because of these similarities, I think few would argue that the designation of a traumascape is only applicable to modern environments. I further propose we need not limit the bounds of a traumascape to the besieged city, where much of the physical fighting took place, but might extend the traumascape to encompass the lands of the *chora* that bore the brunt of so much of the destruction.

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[86] Steinbeck 2020, 110.
[87] Tumarkin 2019, 5.
[88] Tumarkin 2005, 120.
[89] Tumarkin 2005, 128-9.

Traumascapes in Classical Greece

In the years between the Persian invasion and the onset of the Peloponnesian War, the city of Athens seems to have been able to restore the extensive damage done to the city by the Persians, build a host of new fortifications to protect the city and port, and even invest significantly in monumental architecture.[90] The restoration of Attica meanwhile seems to have been a much slower process. We have already mentioned the damaged state that the sanctuaries were left in following their burning by the Persians in Chapter Three. We are likewise told by Thucydides that at the start of the Peloponnesian War, the rural population had only recently been able to make good the damages done by the Persians.[91] Thus, Thucydides suggests that while the city of Athens prospered in the intermediate years, the rural population seems to have had a much more difficult time even simply restoring their homes. Unfortunately, there is little way to verify this claim, but it presents a very clear divide between the urban and rural experience for this period, which still seemed to remain once these groups had been forced to shelter together inside the city walls during the Spartan invasion of Attica.[92] We get a sense of further resentment from the rural population once it became clear that their recently restored properties would remain undefended during the Spartan's invasion, and therefore lay vulnerable to ravaging once again. It is here that the Acharnians seem to become something of a literary stand in for the regional population, revealing the way in which they viewed the events unfolding around them.

Acharnae was a region of Attica sited to the north of Athens, which happened to sit along a key route of approach for invading armies entering Attica. As is detailed by Kellogg, the inhabitants of Acharnae were long associated with productive activities such as agriculture and charcoal production in the contemporary literature.[93] They also gained a particular reputation for stubbornness and bellicosity which was undoubtedly influenced by the region's experience in the Peloponnesian War.[94] At the outset of the conflict, it was the Acharnians' lands that suffered the greatest destruction at the hands of the Spartan invaders.[95] With Athens having adopted the Periclean strategy, the Acharnians were forced to remain in the city, barred from marching out to defend their properties.[96] This became a point of tension within the city, which Thucydides suggests was an intentional strategy of Archidamus, the Spartan commander.[97] The Acharnians thus gained a reputation as the group most upset by the ravaging of the Attic countryside, and this is further evident from the community's portrayal in Aristophanes' *Acharnians*. It is important to note that this comedy was written around 425 when the ravaging of Attica

[90] Thuc. 2.13.
[91] Thuc. 2.16.
[92] Hedrick 2013, 436-7.
[93] Kellogg 2013, 123.
[94] Kellogg 2013, 121, 137-138. Kellogg argues that this association with bellicosity was also driven by the two cults in the area being devoted to martial gods, Ares and Athena Areia.
[95] Thuc. 2.20.
[96] Thuc. 2.20-21.
[97] Thuc. 2.20; Kellogg 2013, 131-32.

would have been front of mind for the Athenian audience.[98] The Acharnians in the play complain about their vineyards being trampled, their vegetables being stolen, and their oxen being rustled, yet the city offers them no aid.[99] At one point, the protagonist Dikaiopolis, having his vegetables stolen by a band of soldiers, asks "Are the Executive [Committee] going to sit by and do nothing while I'm maltreated like this by barbarians in my own country?" receiving no response.[100] The Acharnians were one of the first groups of Athenians to return to a landscape heavily impacted by the war, and this undoubtedly influenced their decision making. For the Acharnians, whose homeland already represented a traumascape, relationships with their fellow Athenians became strained as they had very different conceptions of how to proceed.[101] Where many Athenians were depicted as wanting the war to come to an end through a peace treaty, the Acharnians are shown to reject this outcome, instead seeking revenge for the losses that they alone suffered at the hands of the Spartans.[102] Indeed as the war progressed and a much greater area of Attica was subjected to similar or worse ravaging, the views of the Acharnians probably seemed a lot less comedic to the rest of the Athenian population. As we have seen, the siege of 405/4 brought the consequences of the siege directly to the city of Athens itself, wholly incorporating the city into the traumascape already encompassing much of Attica.[103] Evidence of the disruptive consequences of the siege were physically inscribed in the transformed landscape that lay around them, yet the city-state seems to have done its best to erase the shame of the defeat from those sites of memory that could be controlled.[104]

In this post-war period, the Athenians did not commemorate the war as they would one of their victories. This is not all that strange, as defeats were only commemorated by Greek city-states in exceptional circumstances, such as Thermopylae or the destruction of the Athenian sanctuaries during the Persian invasion.[105] However, unlike the Persian War, which could be presented in a variety of different manners depending on audience, there was little that could be done to mask the definitive defeat suffered by the Athenians during the Peloponnesian war.[106] Thus, avoidance, or perhaps wilful forgetting, was one means the Athenians employed to rid themselves of the memory of their city's near defeat.[107] Even in the annual funeral orations, which Steinbeck views as "probably the most important source for the Athenian's knowledge of their past", the Peloponnesian War is repeatedly skipped over in favour of rehashing the might of the Athenians during the Persian War.[108] In Lysias' speech, delivered around 390, when the Peloponnesian War was still very much part of living memory, it barely merited five

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[98] Sommerstein 2002, 3.
[99] Ar. *Ach*. 225-230, 763, 1023.
[100] Ar. *Ach*. 164-8.
[101] Kellog 2013, 133.
[102] Ar. *Ach*. 182.
[103] While Steinbock (2012, 284, 292) does not use the traumascape terminology, the ideas are very similar.
[104] Tumarkin 2019, 5; Sendyka 2016, 688.
[105] Chaniotis, 2016, 93.
[106] Yates,2019, 169
[107] Shear 2013, 513, 515
[108] Steinbeck 2012, 57.

lines, while the Persian war of a century earlier received pages of attention.[109] Nor did the Athenians seem to enjoy being reminded of their past defeats at the theatre.[110] Though an earlier example, Herodotus reports that the Athenians were so affected by the tragedian Phrynichus' depiction of the capture of Miletus (an Athenian colony in Ionia) by the Persians in 494 that the playwright was himself fined, and the play banned from future performance.[111] Perhaps as a response, the later tragedians tended towards exploring narratives in which the Athenians were the victors (*The Persians*) while limiting themes of defeat and tales of besieged cities to legendary sieges and peoples, such as the Trojans (*Hecuba, Trojan Women*) and Thebans (*The Seven against Thebes*).[112] Even in Sophocles' *Oedipus at Colonus*, Colonus, a region of Attica and Sophocles' homeland, is described as "burgeoning with laurel, olive and vine", "untrodden" and "unsullied".[113] Yet this tragedy was written at the time of the Decelean occupation in Attica, and presented just after the war, when the devastation of the Attic countryside would have been front of mind for the audience.[114] The choice to render an idealistic burgeoning and everlasting Attic landscape at a time when the opposite was true would not have been missed by the Athenian audience. Perhaps they were intended to read this juxtaposition cynically, doubting the chorus' promises as evidently false, as Brockliss suggests, or perhaps the audience was simply meant to enjoy this idealistic fantasy for a time.[115]

In other situations, rhetoricians and those in power did acknowledge the disaster, intentionally stirring up memories of these past tragedies to motivate the Athenians to some purpose. Examples can be found in the speeches of Lycurgus and Isocrates, who evoke the scarred countryside and graves of fallen Athenians in their appeals.[116] The example I want to focus on, however, is the mid-fourth century stele discovered in Acharnae that was inscribed with both the Oath of Plataea and the Oath of the Ephebes (see Figure 10).[117] That this stele was sited in Acharnae, the region most strongly associated with the devastation of the landscape in the Peloponnesian War, is in itself suggestive.[118] While others have

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[109] Lys. 2.
[110] Pritchard (2018, 235) highlights that the theatre played a vital role in developing the popular culture of the city-state and that playwrights had to appeal to non-elite theatregoers. He thereby suggests that these performances presented a more generalised understanding of events than found in other contemporary literature.
[111] Hdt. 6.21.
[112] Chaniotis (2016, 93) notes that ancient communities tended to proliferate foundation stories and tales of victory, while avoiding defeats unless they could be connected to an important sacrifice harkening a new beginning or exemplary tale.
[113] Soph. *OC.* 16-17, 675, 690. Brockliss suggests the imagery used for Colonus, such as olives and nightingale, could be interpreted as a wider reference to Athens as a whole.
[114] Brockliss (2021, 115) gives a date for the writing of the play during the Decelean stage of the Peloponnesian War but after 411, and the first performance as 401.
[115] Brockliss 2021, 128. For additional discussion of the use of rural landscapes in Greek drama see Roy 1996.
[116] Lycurg. *Leoc.* 38, 43-45; Isoc. *On the Peace,* 8.77-8.88. See Ober (1985, 51-66) for further discussion of the role that Athenian rhetoricians played in developing the defensive mentality at Athens.
[117] Friend 2019, 19, n.46; Kellogg 2013, 264. Both Friend and Kellogg note the disputed identification of this version of the Oath of Plataea in the scholarship. As I have noted previously, there appear to have been many versions of the oath which were later collated so I am happy to accept this version as one of many authentic oaths that each differed slightly in form.
[118] Kellogg 2013, 269-270.

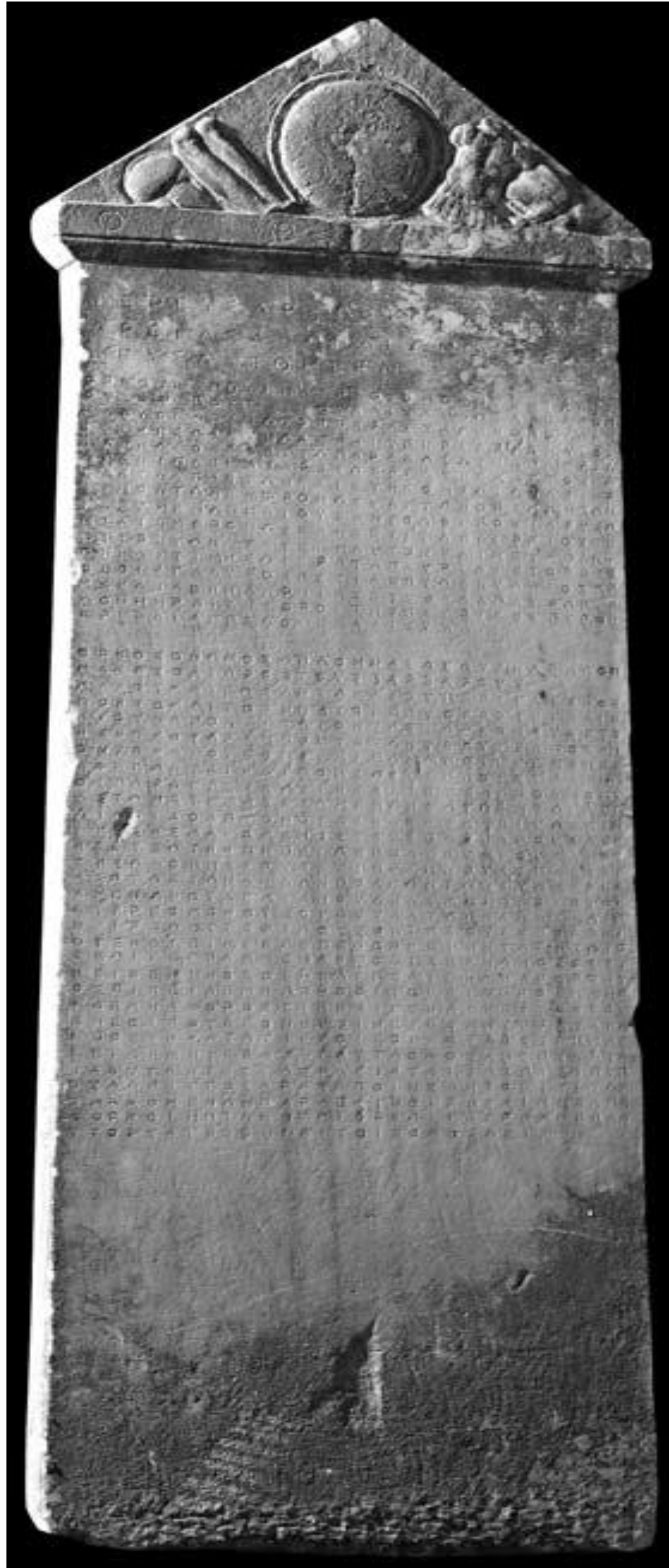

Figure 10: The Stele containing both the Oath of Plataea and the Oath of the Ephebes discovered in Acharnae (From Friend 2019, 20)

viewed the placement of these two oaths on the same stele as unconnected, Kellogg thinks this placement was intentional and symbolic.[119] At the time of its creation, Macedonia had risen above the other Greek city-states in power and threatened to overrun Athens. In Kellogg's view, by attaching the oath of Plataea, which was strongly associated with the 480 Persian invasion and eventual Greek victory over the barbarian power, the *ephebes* were intended to transplant these associations onto the Macedonians, who were to be viewed as the current barbarian threat.[120] To take this even further, I propose that the Oath of the Ephebes, which we have already seen directly referenced the defence of the countryside and its crops, evoked a similar association with the Peloponnesian War. If this were the case, this stele was likely to have instilled an understanding among the *ephebes,* and any other observers, of the consequences if they were to fail in their mission to defend their homeland by evoking two of the most devastating periods in Athens' history.

Yet even the Acharnians seem to have undergone a shift in identity over time. As Kellogg notes, the bellicosity they were once famed for eventually gave way to a stronger association with plant life and Dionysius.[121] I can't help but think this was another consequence of the wilful forgetting that the Athenians were engaged in. It was their actions in the Peloponnesian War that strengthened the Acharnians link with bellicosity, and once this was excised from the wider Athenian collective memory, it was only those who physically witnessed the scars left by the war, or the rare act of commemoration, such as the stele discussed above, that would remember this association. As the years passed, and the consequences of the siege played a much less active role in the everyday lives of citizens, this situation was likely repeated across the Athenian state. Anniversaries and other commemorative events may have served as potent reminders, but the transformed landscape probably became somewhat normalised over time.[122] Despite occupying what I have termed a traumascape, we should not imagine that individuals spent their time wholly mired in their trauma, nor were unable to function in their everyday lives. Yet, even though these associations gradually faded from front of mind, traumatic events could, as we have seen, be evoked in order to inspire action. By pointing to physical vestiges of war, such as graves, ruined sanctuaries, or destroyed farmhouses, rhetoricians could weaponize traumatic memories, and motivate the populace to convict a traitor, fund new fortifications, or stand against new threats to the city-state.[123] There was, however, the risk of taking this too far, as Phrynicus discovered, by alienating an audience who did not want to be reminded of past suffering. Ultimately, in Athens, as the impacts of the war were downplayed in public discourse, I suggest that the traumascape eventually became something of an underlying system. It retained the potential to subtly influence decision making, yet mostly remained dormant. However, when this underlying trauma was triggered, either through intentional actions, such

[119] Kellogg 2008, 1.
[120] Kellogg 2008, 9.
[121] Kellogg 2013, 142-3
[122] Yates 2019, 188.
[123] Ober 1985, 58-60.

as speeches by political firebrands, or unintentionally, as individuals stumbled upon a discarded helmet or broken piece of masonry in their daily activities, the traumascape rose to the surface and forced individuals to recollect the event from which it was formed. A very different approach seems to have been taken by displaced populations, however, who made use of the landscape to remind future generations of their history, and in many cases, even managed to restore the city that they had lost.

There are countless other ancient candidates for traumascapes include those cities razed following a successful siege. Examples include Messenia, seventh or eighth century BCE, Plataea in 427, Selinus in 411, the forced dissolution of Mantinea in 385, Thespiai in 371, Phokis in 346, and Thebes in 335, which all saw a defending force succumb to a besieger's efforts. In such situations, individuals who survived the chaos of the siege could only look on helplessly as their home city was looted and destroyed. With the loss of the *polis* at its center, the city-state essentially ceased to exist, and the survivors became refugees of a sort.[124] While much of the land surrounding a razed city would have been subjected to intense ravaging during the course of the siege, this was where many of the surviving populace ended up making their homes.[125] The survivors and returning refugees proved to be highly resilient, and the archaeological data suggests that they continued to work the lands of the '*chora*' despite the lack of a central city.[126] Over time, this landscape could have been made productive once more, and the rhythms of everyday life restored, yet the inhabitants must have lived a strange apolitical existence.[127] The destroyed city itself must have loomed large over the countryside, in a figurative sense, failing to let any observer forget the circumstances in which it was destroyed. Thus, while it was the city that was subjected to the sack, destruction, or slaughter, the landscape surrounding it may too have been incorporated into the bounds of the traumascape. Tumarkin has noted that traumascapes often have a pulling effect, with individuals becoming drawn to the space, and I suggest that the affected population's desire not to abandon these spaces is evidently clear from the frequency with which destroyed cities ended up being restored.[128] Sometimes this restoration happened within a relatively short period, as was the case with Thebes which was rebuilt by Cassander two decades after its destruction. In other instances, this restoration occurred decades or even centuries after the city's destruction, as in the case of Messene, which was rebuilt by the Thebans some three or four centuries after its destruction.[129] Following the reoccupation of razed cities, the former city names and demonyms were reintroduced, suggesting a desire to create a historical link with the former city regardless of temporal distance. Once the Messenians had been granted their city once again, they notably re-introduced a number of rituals

[124] Bintliff 2021, 341.
[125] See Tuplin (1986, 337-9) for the example of Thespiai in 372/1, where the supposedly expelled populace seem to have remained in the area.
[126] Kulesza 1999, 155-157; Bintliff 2021, 341. In rare cases like Potidaea, some may have discovered their former home had been appointed to a colonist or soldier from the besieging city-state.
[127] Snodgrass 2016 15,22; Bintliff 2021, 341
[128] Tumarkin 2005, 30-31, 105; Fachard and Harris (2021, 15-16) note that in 80 percent of cases, *poleis* survived their fated destruction.
[129] Paus. 4.27.6-7; Diod. Sic. 15.66.1.

connected with the earlier city, which had reportedly been remembered through the centuries thanks to cultural elders and institutions such as temples.[130] Whether these reintroduced rituals were truly historical in nature, or rather invented traditions as per Hobsbawm, is unclear, though this ultimately matters little to this study.[131]

Cultural memory undoubtedly played a significant role in keeping the memory of destroyed cities alive, with accounts of the city and its destruction recorded and propagated through contemporary literature or storytellers. The local populace likely also continued to play a role in keeping the memory of the city alive. This might have been performed actively, through storytelling activities or appeals to other city-states, or passively, as the very continued presence of inhabitants of the area served to remind witnesses of the city that previously occupied the space. Likewise, ruins, Pétursdóttir and Olsen suggest, can have an unnerving effect upon people, and serve as anomalies within the order of everyday life.[132] Observers who witness physical ruins, such as those of a former city, may be overcome with a sense of disorder, and instinctively feel a need to right that disorder by restoring what had been there previously, or by creating something new in its place.[133] A traumascape needs not therefore be viewed as a stagnant space where the populace was mired in mourning their past losses. By keeping the memory of their past alive, as with these ruined cities, a traumascape might have served as the catalyst for its own eventual restoration.

[130] For more on the Messenians, see Chapter 4 of Alcock (2002, 132-175) who discusses the re-occupation of Messenia in detail.
[131] See Hobsbawm (1983, 1-5, 8) for further discussion on the idea of invented traditions. See Yates (2019, 204-205, 208, 217-219) for a discussion of how invented traditions were introduced by Philip and Alexander to legitimise their rule and unify their Greek subjects.
[132] Pétursdóttir and Olsen 2014 12.
[133] Pétursdóttir and Olsen 2014 13.

Conclusion

"The land gave up its trees, the dead their gravestones, and the temples' arms. Some began to build walls, others to make ditches and palisades"
(Lycurgus, *Against Leocrates.* 44, trans. J. O. Burtt)

I have endeavoured to demonstrate, as the quote above suggests, that few areas of the city-state were unaffected by siege. The existing order could suddenly vanish as an approaching army was spotted and people scrambled for refuge, searched temples for weaponry, or gathered whatever they could find to repurpose into defensive structures. In this thesis I have demonstrated the variety of ways a landscape might be transformed over the course of a siege, as the besieging force sought to gain any advantage they could over those sheltering within a stronghold. The destruction of homes, fields, and infrastructure was common, exacerbated by the besieger's frustration that the besieged dared to refuse an invitation to pitched battle. For those inside a besieged stronghold, it must have been hard to plan a return to one's home amidst the deprivation and the all-consuming fear that the walls might be breached. Reduced potentially even to the depths of cannibalism, even the survivors of these sieges saw their internal lives change just as much as the external landscape did.

I have also demonstrated that in the Classical Period, sieges functioned as tremendous catalysts, resulting in innovative developments that shaped the direction of city-states, the operations of the countryside, and even the wider military landscape. Having experienced the economic devastation wrought by siege, individuals gained a new appreciation for the countryside, and new strategies were introduced to protect the land itself. At the same time, we saw a conservativeness which drove individuals to invest in personal security and motivated farmers to appreciate the reliability of the less profitable grain agriculture, thereby shoring up the internal food supply. In the years following the Peloponnesian War, the Greeks continued to develop their military capabilities, introducing more professional armies, enhancing engineering prowess, and fielding massive siege weapons in battle. Such developments undoubtedly increased their capability to damage or modify the environment. It was during this period, for instance, that Alexander's army engineered the mole at Tyre which connected the former island to the mainland, an environmental consequence of a siege two millennia ago that can still be seen today.[1] Yet, in many cases the devastation wrought upon the landscape was lessened in later sieges. New developments in siege weaponry facilitated the storming of fortifications, allowing the long encirclements and blockades of the fifth century to be bypassed in favour of the quick capture of a stronghold.

[1] Plut. *Vit. Alex*. 24; Curt. 4.2.16-18.

As the years passed, many of the sieges of the Classical period faded from living memory, as those who experienced the event firsthand passed on. Some sieges lived on in the cultural memory, while others were forgotten altogether, becoming lost for all purposes to history. The sites of memory that dotted the landscape ensured that some examples would not be forgotten, though the trauma associated with these sieges has long since faded. The site near Nestane, nestled in the Arcadian hinterland, named the Ruins of Philip's Camp could not help but evoke the image of the Macedonian king that persisted in the cultural memory, even down to Pausanias' time.[2] The fortress of Decelea, a physical reminder of the occupation of Attica in the Peloponnesian War, projects its memory even further.[3] Sat in the Attic countryside, the slowly sinking fortress must have continued to remind passing Athenians of their shameful defeat. Eventually buried, this fortress was rediscovered by a modern audience, creating a tangible link between the Classical Greek world and our own. Many other sieges only survive in textual form, merely remembered for an interesting stratagem or vignette compiled in a collection collated by Frontinus or Polyaenus. In almost all instances, however, the details of the lives of the individuals involved in these sieges has become obscured or lost, and we can only imagine the fear, loss, and suffering that resulted from siege warfare. Through a careful reading of the ancient literature, paired with the examination of evidence from excavations and archaeological science, I have endeavoured to demonstrate in this study that it is possible to get at least a glimpse of some of these lives. Yet there is still much work to be done in this area. Countless conflicts, disasters, and turmoil must have likewise served as catalysts for their own traumascapes, which represents an area ripe for expansion. Another worthwhile path for future study is to examine how these concepts played out in the Greek *imaginaire*. Ultimately, as our understanding of these areas continues to develop, I hope that scholars will continue to find out more about these fellow humans, who experienced events that we today can only imagine.

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[2] Paus. 8.7.4.
[3] Ober 1985, 141-2.

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