Dear Reader:

What follows is a rough draft of a chapter (the fifth(?) of approximately twenty-five) from my forthcoming study, *The Chronology of Early Greek Poetry*. Aside from a handful of crossreferences to other chapters it is a self-contained essay. It discusses the origins of the four major epochs for the fall of Troy adopted by ancient scholars, which I call the Spartan epoch (1150 BCE), the Attic-Sicyonian epoch (1212), the Alexander epoch (1334), and the Eratosthenian epoch (1184). It opens with a succinct introduction to Greek genealogical reckoning and years-per-generation rules. Among other matters it reveals how Hippias' dating for the first Olympiad (776) and the Eratosthenian epoch were calculated.

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The Trojan Epochs

Over three thousand years ago, on a gentle hill overlooking the harbor that once interrupted the shoreline south of the Dardenelles, there stood a city called Wilusa. It was the largest urban settlement for hundreds of miles around, the peer of the palace towns at Pylos, Mycenae, and Thebes on the Greek mainland. A towering stone wall protected its citadel, while a stockade fence and a moat cut into the bedrock ringed the extensive lower town. These fortifications served to keep out intruders for a long time, but eventually an enemy appeared who would prove too strong or too savvy to be held off. Although their identity is still unknown, it is likely that the invaders had some connection to the so-called 'Sea Peoples' who sacked urban settlements all across the eastern Mediterranean at the end of the Bronze Age. Once they broke through its defenses, they set Wilusa on fire, burning it to the ground, its wooden structures reduced to thick piles of charcoal and ash.

A century's worth of painstaking work by Bronze Age historians and archaeologists has recovered key parts of Wilusa's story, solidifying its claim to be the inspiration for the city later known to the Greeks as Ilium or Troy. Letters recovered from the Hittite capital of Hattusa record its name and hint at its geopolitical signficance. Heinrich Schliemann uncovered the impressive citadel walls more than a century

ago in a hasty dig, but these were not placed correctly in time until Carl Blegen reexcavated the site in the 1930's. Recent excavations by Manfred Korfmann and his team have revealed the extent of the lower city and more fully mapped the destruction layer, uncovering the skeletons of those who died in the fighting next to intact stashes of sling stones. The date of the sack can be inferred from scattered bits of pottery found below the destruction level which betray through their form and design the era in which they were made. Based on these fragments and other clues Blegen estimated that the arson took place in 1250 BCE. A recent reassessment of the material by Penelope Mountjoy points to a date closer to 1200.[1]

Despite the damage it suffered, Wilusa was reoccupied, with most of its population retreating behind the still-intact stone walls of the upper citadel. Around 1100 BCE the city's population underwent a significant shift, unaccompanied by violence, when Thracians from across the Dardenelles took up residence there; the newcomers also made their presence felt at sites further east like Gordium. In the decades that followed the local population slowly diminished, another fire swept through the town, and by 950 the old city of Wilusa had become a ghost town, its residents occupying but not rebuilding the ruins. It is only in the eighth century that new structures appear again, stone circles on which numerous fragments of cooking vessels have been found. To all appearances it would seem that festivals were regularly being held here on occasions when locals and visitors would gather to sacrifice animals, drink wine, and, presumably, share stories.[2]

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[1] Mountjoy 1999. I have relied on Rose 2014, 8–43, for this summary of the early history of Troy/Wilusa. For an up-to-date account of the Mycenean collapse and ideas about the 'Sea-People', see Cline 2014.

[2] Rose 2014, 45–53.

What kinds of stories did these revellers and their ancestors tell about the ghost town? We will likely never know the exact answer for sure. After the twelfth century BCE the Greek-speaking world became agraphical, and no scribe in Egypt, Assyria, or even Cyprus, where the art of writing did survive, found events in the Aegean worth recording. Yet tales of some kind must have been told, for it was during this period that a tradition of storytelling developed that memorialized the destruction of Wilusa/Ilium, now also known by its other name, Troia. Some of these storytellers were bards who recited their narratives in verse to the accompaniment of the cithara. Their songs told of a war fought over Helen, the destruction of Troy, and its aftermath; as they evolved these epics came to focus on specific characters like Achilles, Hector, and Agamemnon, and heroic themes like honor and homecoming. Eventually written transcripts of these songs were made, of which the *Iliad* and *Odyssey* are the only examples to survive complete. By the time these transcripts acquired enough prestige to be considered 'literature', the Greeks had come to regard the war at Troy as a defining historical event, one that had taken place long ago at a time when heroes walked the earth and humans would occasionally encounter the gods face to face.

Around the time of the Persian Wars, some Greeks developed an interest in the precise chronology of their collective past.[3] While the

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[3] On this development, Burkert 1995 is an excellent starting point, as are the remarks in Feeney 2007, 68–86. Prakken 1943 is also useful, although his specific conclusions do not always stand up to scrutiny. Most pieces of older scholarship on the origins of Greek chronography takes for granted the thesis advanced by Meyer 1892 that Hecataeus was the first to draw up the Spartan 'king lists' and to posit 40-year generations. In this chapter I will argue that the Spartan genealogies more likely go back to the mythographer Pherecydes, and that the practice of converting generations into years does not predate Herodotus and Democritus, who were active in the second half of the fifth century. Meyer hypothesized Hecataeus' role as a way of explaining some curiosities in Herodotus' chronological reckoning; in the next chapter I will propose more economical solutions for these oddities.

details of this development are obscure, Greek contact with the ancient kingdom of Egypt no doubt played a major role in inspiring this interest.[4] In order to quantify the measures of the past, they came to identify the sack of Troy as a year zero, an epoch from which all subsequent events could be demarcated. Unfortunately, there was no tradition of year-counting that extended back into the heroic age; the scholars who were exploring the past were forced to make estimates of the number of years that had elapsed. In practice this usually meant estimating how many years separated the fall of Troy from the next great war that pitted Asia against Europe, Xerxes' attempted conquest of Greece; dates could then be identified by counting forward or backward from these epochs. The year when Troy fell thus formed the basis for a widely-used dating scheme; yet this year possessed no date of its own.

In what follows, when statements about Trojan epochs are made that use modern BCE dates, it is important to bear in mind that early Greek historians did not attach numerical labels to the year of Troy's fall, but instead made counts of the number of years to more recent events like the Persian invasion. They also divided the year differently than we do, making use of an Athenian calendar year whose New Year fell right after the summer solstice. From here on all numbered years BCE should be understood to begin in late June and continue into the next Julian year, so that the date 481, for instance, properly designates the period of time from late June/early July of 481 to late June/early July of 480.

Today the best known Trojan epoch is the one established by Eratosthenes of Cyrene in the late third-century BCE. After sifting through the chronological lore that he found in the books of the library at Alexandria, he set its date in the year 1184. The way Eratosthenes defined this epoch was by measuring out successive spans of time from the year of Alexander the Great's death, 324; the highest of these

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[4] See the anecdote of Hecataeus below, pages 9/10.

intervals terminated in the year when Troy fell (Clement, *Stromata* 1.21.138).

From Troy' sack to the Heraclids' return	80 years
to the settlement of Ionia	60 years
to Lycurgus' guardianship	159 years
to the year before the First Olympiad	108 years
to Xerxes' crossing	297 years
to the start of the Peloponnesian War	48 years
to the defeat of Athens	27 years
to the battle of Leuctra	34 years
to the death of Philip	35 years
to Alexander's death	12 years

This set of intervals provided the basis for subsequent chronicles and world histories composed by authorities like Apollodorus of Athens and Eusebius of Caesarea, systems which in turn underlie most modern chronologies. Eratosthenes' determinations were of absolutely fundamental importance.[5]

Despite its canonical status, Eratosthenes' Trojan epoch was neither the only nor the earliest to be proposed. Long before the Library at Alexandria was founded at least three different epochs had come into common use. The first of these I will refer to as the Spartan epoch because it was based on the genealogies of two men, Leonidas and Leutychides II, who were kings of Sparta at the time of Xerxes' invasion. According to this reckoning the fall of Troy took place in the year 1150 BCE. This epoch proved popular and was adopted by a diverse range of figures including Democritus, Hippias, Ctesias, Ephorus, and Manetho. Nevertheless, a few scholars, giving weight to

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[5] Möller 2005 expands nicely on the topic, as does Feeney 2007, 77–86.

numerological and astronomical considerations, preferred a higher chronology that set Troy's fall in the years 1212. Since these savants hailed from Athens and Sicyon, I will call this the Attic-Sicyonian epoch. Three other historians – Duris, Timaeus, and Cleitarchus – placed the fall of Troy in the year 1334, 1,000 years (counted inclusively) before the start of Alexander's invasion in 335; hence I will refer to this last dating as the Alexander Epoch. Widespread acceptance of Eratosthenes' system caused these older epochs to become historical curiosities. Yet they left a mark in certain documents, such as king lists that had been drawn up before Eratosthenes' time and copied unrevised by figures like Diodorus Siculus and Castor of Rhodes. With the help of these lists and other scattered allusions the older epochs can be recovered.

Aside from assembling the relevant evidence for these epochs, my main aim in the present chapter is to reconstruct the reasoning that gave rise to them. In some cases the thought process is more or less obvious, in others it is more obscure; considering all of them in one place allows us to use the obvious cases to shed light on the more obscure ones. As it happens, one of the most puzzling cases is also the most well-known: Eratosthenes' epoch. There is no consensus as to how Eratosthenes determined that Troy fell in the year 1184 BCE, or why he chose to innovate when alternative epochs had already received the blessing of tradition. As we shall see, Eratosthenes, who was a brilliant mathematician, was correcting an error in his predecessors' counting method. Before Eratosthenes, chronologists often used inclusive counts to measure temporal spans, which inflated their intervals by one count unit; Eratosthenes, by contrast, counted exclusively. In addition, he employed a different epoch – Lycurgus' guardianship, rather than Xerxes' crossing – for making his year count to the fall of Troy. These two premises allow us to derive the year 1184 from other well-known

data. In a similar fashion we can also reconstruct the tricks and techniques his predecessors used to demarcate their epochs.

Each Trojan epoch served in a sense as a chronology unto itself, since it established a unique baseline in terms of which other events from early Greek history might be dated. Most of the specific dates that have come down to us assume the Eratosthenian system – but not all. A few datings from early historians have come down to us with distortions caused by failure to acknowledge or account for a shift in the underlying Trojan epoch.[6] One place where such a misrepresentation occurs is in the post-Hellenistic dating of the Cypselids, the early dynasty of strongmen who ruled archaic Corinth. In an early historical writer, probably Ephorus, the accession year of Cypselus, the first member of the dynasty, was expressed as a specific number of years from the fall of Troy. However, the epoch in question was the Spartan epoch, 1150 BCE, not the Eratosthenian one. Chronographers like Apollodorus started from the latter and thus disseminated a set of dates for the Cypselids that were 34 years too high. A set of longstanding puzzles relating to the chronology of Cypselus and Periander vanish once this correction is made. It also leads to a lower dating for two early poets, Arion and Eumelus, and

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[6] Panchenko 2000 was the first to attempt to explain these errors in terms of unacknowledged shifts in the underlying Trojan epoch between Eratosthenes' 1184 BCE and Democritus' putative date of 1151. I owe my original interest in the subject of ancient chronology to his article and agree with him on some points such as the low chronology for Solon. However, the instances of misdating he cites as evidence tend to be loose, i.e. between 30 and 35 years, rather than the variations of 33 years which his thesis demands; he also does not trace the provenance of the dates in a way that would show where the misdating occurred. I have discussed some of his examples in my last book (Thibodeau 2019, 69/70, 194) and will consider the rest in the chapters that follow. Shaw 2003 has argued that many variant datings for events in archaic history are due to the co-existence of two alternative systems of Olympiad dating which placed the first Olympic games 52 or 108 years higher than 776. Unfortunately there are precious few dates that can be shown to be 52 or 108 years too high in the way that her hypothesis would suggest. That said, I have benefitted greatly from her exposition of numerous chronological conundrums and keen attention to the contradictions in the ancient tradition.

makes a better fit with what we know about the Cypselid presence at Delphi. The specifics of these redatings will be explored in chapter eight.

Reconstructing these systems will also make it possible to see how the various ancient dates for Homer and Hesiod, including Herodotus' famous assertion that they lived "no more than 400 years before my time," were derived (*Histories* 2.53). This is a particularly important result for this book because the ancient dates for the two poets are quite high and tend to exert an upward pull on modern datings, lending a specious plausibility to dates in the eighth century. However, the ancient dates rest on confabulated foundations, and can offer us no aid in determining when the epics were composed and fixed. For that, we must rely on more stringent methodologies and the patient accumulation of tedious facts. The ancient chronologies of Homer and Hesiod receive a comprehensive discussion in chapter twenty two.

Finally, knowledge of the various pre-Eratosthenian epochs for Troy can help us to resolve a number of interesting historical and philological questions. For instance, how Hippias established the date for the first Olympic games has long been a mystery, given that written records of winners were not made for at least two centuries after the games were established. In this chapter I will show that the year 776 BCE was the midpoint between the Spartan epoch and the year ca. 399 when Hippias compiled his famous list, and that this symmetry determined Hippias' choice. Hippias' contemporary the mythographer Damastes of Sigeum claimed to be able to identify the day and the month of the fall of Troy, and the number of days from the sack to the summer solstice. As we shall see, this remarkable calculation was made possible by the fact that he assumed the Spartan epoch for the year of Troy's fall, then applied the nineteen-year Metonic cycle to reconstruct the lunar-solar configuration in that year. Or, shifting our attention to philological matters, there is the problem that Manetho's list of Egyptian pharaohs

and the Attic king list have both come down to us in slightly different forms. In each case we can distinguish between an older version which observes the original Spartan or Attic-Sicyonian epoch, and a younger version which has been manipulated, apparently by Eusebius, in order to accommodate it to the Eratosthenian epoch for Troy. This tells us something about the compromises Eusebius had to make while compiling his universal chronicle, and also allows us to identify the most faithful witnesses to the original documents. These are just some of the insights that can be had from an improved understanding of the foundation stones of ancient Greek chronography.

CHRONOLOGY THROUGH GENEALOGY

Year counts are almost never used to measure the periods of a community's life in Greek texts composed before the Persian Wars; only individual lives and experiences are so measured. Odysseus recounts how he spent ten years at war and ten years coming home, Mimnermus expresses the wish that he might die at age 60, Xenophanes estimates that he spent 25 years of his life in his homeland, and another 67 years in exile.[7] At a somewhat higher level of abstraction, Solon proposed a scheme for dividing the human lifespan into hebdomads, seven-year chunks; this system abstracts from individual to type, yet still concerns the life of a single being (fragment 27 West). It is true that the lengths of wars are sometimes recorded, like the twenty years of the first Messenian war or the ten years of the Trojan. Yet no archaic poem relates the number of years of any king's reign or the length of a dynasty; no archaic public inscription tallies the number of years since a city's foundation. It is possible that such counts circulated informally, among

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[7] Odyssey: *Odyssey* 14.240/1, Mimnermus and Xenophanes: Diogenes Laertius, *Lives* 1.60, 9.19.

families and tribes, as part of oral tradition. But these year counts were apparently not important enough that anyone from the sixth century BCE or beforehand felt the need to write them down.

Instead, from the very beginning of Greek literature, we find communal time being measured in generations, γενεαί. This term was rather loose in its usage, sometimes designating all the persons who occupied the same level in a family tree (fathers, grandfathers, etc.), sometimes the cohort of people vaguely thought of as contemporaries.[8] A list of forefathers would thus span a certain number of generations, as would a list of a city's past rulers. Either sort of list could then furnish a generational count that would provide a crude but serviceable estimate of the distance between the present and some period of time in the past.

In early texts the number of generations tallied is never very large. Although Homer famously compared the generations of men to leaves (*Iliad* 6.146) – as if, like leaves, they were too numerous to count – the family trees which we encounter in early epic tend to span just a handful of generations. In Hesiod's *Theogony* the line from Chaos to the children of the Olympians ends in the fifth generation; in an Orphic theogony, the succesion ends in the sixth.[9] When Glaucus recounts the story of his ancestors to Diomedes in the *Iliad*, his narrative runs from his great-great-great-grandfather to himself, six generations (6.153–211); Aeneas, when he boasts about his lineage to Achilles, reaches eight – Zeus, Dardanus, Erichthonius, Tros, Assaracus, Capys, Anchises, and himself (20.200–240). One of the more remarkable features of the Hesiodic *Catalogue of Women* is the size of the family trees it traces. The most extensive of these, the mythical precursors of the Argives, goes

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[8] The range of possibilities are well-discussed by Prakken 1943, 5–17.

[9] Hesiod: (1) Chaos, (2) Uranus, (3) Chronos, (4) Zeus, (5) Heracles etc. For the Orphic theogony, see Plato, *Philebus* 66c.

back nineteen generations from Diomedes to Inachos; the other genealogies tend to be substantially shorter.[10]

The oldest known genealogies for historical individuals are of similar scope, typically encompassing between 15 and 20 generations before ending with a figure who is a god or child of the gods. A famous example of this sort of reckoning appears in Herodotus' well-known story about Hecataeus of Miletus and his encounter with the priests of Egyptian Thebes. After Hecataeus recited the names of his forefathers, the priests responded by showing him the statues of their predecessors, which formed a succession of fathers and sons 345 names long. The revelation of the vast scope of Egyptian antiquities left the Milesian stunned – his genealogy had spanned a mere fifteen mortal generations, "reaching a god in the sixteenth generation," as Herodotus says (2.143.1). Latent in this story is the assumption that a genealogy sixteen generations long would ordinarily have been enough to impress; but Hecataeus' Greek ancestry was no match for the priests'.[11]

The Athenian general Miltiades the Younger belonged to an old family, the Philiads, that claimed it could trace its ancestors back to the hero Ajax.[12] This genealogy was recorded by his younger contemporary Pherecydes of Athens in the 460's BCE. It placed his namesake and uncle Miltiades the Elder in the fifteenth generation after Ajax, which entails that Miltiades, the hero of Marathon, belonged to generation sixteen. Thus, since the Homeric warrior was a grandson of Zeus, it could be said of Miltiades that he could trace his family line back to a god in the eighteenth generation.

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[10] See Fowler 1998, 8. All of these texts stand in close proximity to oral traditions; for the handling of genealogy in such traditions, see especially Thomas 1989, chapter 3.

[11] His fellow Milesian Thales is said to have come from a family descended from the Phoenicians Agenor and Cadmus (Diogenes Laertius, *Lives* 1.22).

[12] Marcellinus, *Life of Thucydides* 2. There are serious problems in reconciling this genealogy with our other evidence for the family; see Thomas 1989, 155–195, Fowler 2013, 474–478.

An inscription from the island of Chios which was composed around the same time that Pherecydes was active lists the fourteen paternal ancestors of a local resident named Heropythus.[13]

Heropythus,
son of Philaeus,
son of Miccylus
son of Mandrocles,
son of Autosthenes,
son of Mandragores,
son of Erasion,
son of Hippotion,
son of Hecaedes,
son of Hipposthen,
son of Orsicleus,
son of Hippotion,
son of Hecaus,
son of Eldius,
son of Cyprius

If Cyprius was supposed to be the eponym of the Greek island, then like other geographical eponyms, e.g. Europa or Tros, he was probably considered the son or grandson of a god; hence, his line ended with a god in generation fifteen or sixteen.

Since these three historical examples all involve Ionians, it might be useful to describe genealogies containing 17±1 mortal generations as the 'Ionian standard'.[14] This standard makes its presence felt in other texts,

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[13] Wade-Gery 1953, 8/9, provides a photo and transcription.

[14] Cf. Fowler 1998, 3: "There is also a limit to the depth of genealogies; they rarely exceed fourteen generations in any degree of complexity." This may be a matter of common northeast

like Herodotus' narrative of the kings of Egypt. In an effort to impress upon the reader just how old Egypt is, he states that there were 341 pharaohs before his time. Yet instead of expounding the biographies for all 341, he records the names and deeds for just seventeen.[15] A royal history of enormous size is thus reduced to something that Greeks would find more familiar.

THE SPARTAN GENEALOGIES

> Socrates: But what in particular do the Spartans enjoy listening to and approve of? You must tell me, since I can't figure it out.
> Hippias: The genealogies of heroes and humans, Socrates, and settlements, how their cities were founded long ago, and in general anything involving antiquities they will gladly listen to, so much so that for their sake I have forced myself to memorize and drill all the particulars relating thereto. (Plato, *Hippias Maior* 285d)

Early in the fifth century BCE two genealogies entered circulation that would come to exert a decisive influence on Greek historical chronology. These were the personal genealogies of the Spartans who bore the title 'king' at the time of Xerxes' invasion – the famous Leonidas, hero of Thermopylae, along with Leutychides II. Herodotus records both genealogies. The first line, that of the Agiads, starts with Leonidas and goes back to Eurysthenes in the sixteenth generation, before adding five more patriarchs: Aristodemus son of Aristomachus,

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Mediterranean culture: early Phoenician grave inscriptions spell out the ancestors of the deceased to as many as seventeen generations (Quinn 2018, 37/8).

[15] The seventeen in question: Menes, Moeris, Sesostris, Pheros, Proteus, Rhampsinitus, Cheops, Chephren, Mycerinus, Asuchis, Anysis, Sethos, Psammetichus, Necos, Psammis, Apries, and Amasis.

son of Cleodaeus, son of Hyllus, son of Heracles (7.204.1). The second line, that of the Eurypontids, runs from Leutychides II to Procles in the sixteenth generation before concluding with the same five names (8.131.2). These genealogies are sometimes referred to as the Spartan king lists; yet while the majority of names on them were Spartan kings, this is not how Herodotus represents them.[16] He constructs the list using the same 'X τοῦ Y (gen.)' formula that we find in the Heropythos inscription, which, absent further qualification, always means 'son of'. Herodotus himself adverts to the fact that Leutychides' father and grandfather were not kings, and recounts the deeds of Spartan kings like Cleomenes whose names do not appear in his genealogies.[17] For this reason I shall refer to Herodotus' lists, which mix kings and forefathers, as the Spartan royal genealogies.

If we pair the two genealogies with each other – something Herodotus does not do – and make one simplifying assumption – namely, that patriarchs from the same numbered generation were alive at the same time – we get a line of descent that looks like this:

21. Heracles
20. Hyllus   (Generation of the Trojan War)
19. Cleodaeus
18. Aristomachus
17. Aristodemus

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[16] Efforts to harmonize Herodotus' genealogies with the king list found in Pausanias (*Tour* 3.2.1–3.4.10, 3.7.1–11) and Diodorus/Eusebius (105.11–106.27 Karst) have generally been unsuccessful for the basic reason that they are two different animals; cf. Chrimes 1971, 333–347, Huxley 1962, 117–119.

[17] Herodotus 8.131.3, 5.42ff., 52ff. The arguments of Henige 1974, 207–213, seem to me decisive. *Pace* Cartledge 2002, 295, Pausanias says nothing that can be construed as an opinion on the question of whether Herodotus' names constitute king lists or not; he only mentions Herodotus once (3.2.3), to comment on his variant spelling of the name Labotes.

16. Eurysthenes and Procles
15. Agis and Euryphon
14. Echestratus and Prytanis
13. Leobotes and Polydectes
12. Doryssus and Eunomus
11. Hegesilaus and Charilaus
10. Archelaus and Nicandrus
9. Teleclus and Theopompus
8. Alcamenes and Anaxandrides
7. Polydorus and Archidemus
6. Eucrates and Anaxilaus
5. Anaxandrus and Leutychides I
4. Eucratides and Hippocratides
3. Leon and Hegesilaus
2. Anaxandrides II and Menares
1. Leonidas and Leutychides II   (Battle of Thermopylae)

How many of the names on these lists were actually borne by flesh-and-blood individuals is anyone's guess.[18] The poet Tyrtaeus, active ca. 600 BCE, speaks of Theopompus as a figure from the generation of "our fathers' fathers", which makes it credible that the kings of generations one through nine were historical figures (Pausanias, *Tour* 4.6.5). At the top of the chain of ancestors, Heracles and his immediate progeny should belong to the realm of legend. Generations ten through sixteen thus present the greatest uncertainty. The transition from a single to a double line at sixteen has an artificial look to it, possibly the product of two family genealogies that followed the 'Ionian standard' being joined to the immediate descendants of Heracles; but even such a simple conjecture is hazardous. There is simply no way to tell which of the

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[18] See Cartledge 2002, 90, for discussion.

names in the upper portion of the list were remembered and which were invented.

From our perspective then these two genealogies appear to lose touch with historical realities as they go back in time. Nevertheless, Greeks with an interest in antiquities widely regarded them as true, or sound enough to be regarded as true. Among other functions they offer a clear articulation of the period of time running from Heracles, who was alive one generation before the Trojan War, down to Leonidas and the generation of Thermopylae. If anyone familiar with these lists was asked how long ago the Trojan War took place, they could simply rattle off the names of the kings as far back as Heracles' son Hyllus and answer that the war took place twenty generations before Thermopylae. Generations were not back–derived from year counts; they were the relevant unit of time.

The evidence that Greeks did measure their past this way is abundant; we will encounter instances of it throughout this chapter and those that follow. Herodotus, for instance, while attempting to communicate how catastrophic the Persian conflict was for the Greeks, writes that "in the time of Darius son of Hystaspes and Xerxes son of Darius and Artaxerxes son of Xerxes, who spanned three successive generations, more bad things happened to Greece than in the remaining twenty generations prior to Darius" (6.98.2). The figure twenty here simply represents the span of Greek antiquities covered by the Spartan king list, minus the generation of Leonidas, which overlapped with Darius' reign. As the Persian Wars receded into the past it was a simple matter to update the generational counts. In the *Theaetetus* Socrates mocks the pretension of aristocrats who "list their 25 ancestors, magnified by their going back to Heracles the son of Amphitryon" (175a). The number 25 probably represents the 21 generations linking Leonidas to Heracles with the addition of four generations to cover the timespan between 481 BCE

and the era when Plato was writing his dialogue, between ca. 380 and 350. Note the absence of year counts; the aristocrats for their part were content to think in terms of generations.

While Herodotus is the earlist extant author to record the Spartan royal genealogies, they must have circulated in similar form before his time. Pindar's victory ode for king Arcesilaus IV of Cyrene refers to Battus, the founder of Cyrene, as belonging to the seventeenth generation after Jason and Medea (*Pythian* 4.10). The number seventeen may seem to recall the Ionian standard for genealogies, but the parallel is inexact: Pindar's tally does not apply to the forefathers of an individual from the current age, but indicates how many generations separated Battus, who founded Cyrene ca. 630 BCE, from the doomed couple who sailed on the Argo. How then did Pindar or his informant calculate this interval? Thera, Cyrene's mother city, was a Spartan foundation, so appealing to the Spartan king list would have been a natural move for Pindar or his Cyrenean source to make. Cyrene was founded approximately 150 years before the battle of Thermopylae; at three generations per century, this interval covers part of five different generations. The kings at the time would thus have been Anaxandrus and Leutychides I. The pair belonged to the seventeenth generation after Heracles, which is also the seventeenth generation after Jason and Medea, since Heracles was an Argonaut. If this reconstruction is correct, then there must have been a list of 21 kings in circulation prior to the composition of the ode in 462. Since the celebration of Leonidas' heroic death would surely have inspired the Spartans to fix and publicize his pedigree, the most plausible date for the creation of these genealogies is in the 470's or 460's.

Given the timing of this development, it is likely that the influential historian and mythographer Pherecydes of Athens played a major role in their dissemination. We saw earlier that Pherecydes recorded Miltiades'

genealogy, and, as George Huxley has shown, the historian put this list in writing in the 470's or 460's BCE, shortly before Pindar composed his ode.[19] Pherecydes is also cited as an authority for a genealogy of the physician Hippocrates which has the healer's ancestry go back to Heracles in the 21st generation and Asclepius in the 19th generation.[20] Complicating matters somewhat, Soranus, our source for this information, names Eratosthenes, Apollodorus, and Areius of Tarsus along with Pherecydes as his authorities, which makes it impossible to tell what Pherecydes' own contribution was. Hippocrates, born around 460, would have hardly been out of his twenties by the time Pherecydes was writing, which tells us that the doctor's personal genealogy cannot have been of any interest to the mythographer. That said, Pherecydes could certainly have been the source for its upper reaches. Hippocrates came from Cos, a Doric island whose polis, according to a story that Pherecydes related, regarded Heracles as its founder.[21] Pherecydes may well have supplied a genealogy for the royal house of Cos that mimicked the Spartan genealogies in starting point (Heracles) and perhaps length. Since there is good reason to think that Pherecydes described a Heraclid genealogy for Cos, it would be strange if he did not do the same for the Spartans.[22]

FROM GENERATIONS TO YEARS

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[19] Huxley 1973.

[20] Fowler 2013, 76/7.

[21] Scholia to Homer, *Iliad*, 14.255, Apollodorus, *Library* 2.7.1; cf. Novello 2017, 132/3.

[22] It is also intriguing that the lyric poet Simonides of Ceos knew a different, somewhat shorter genealogy for the Spartan kings, since his genealogy for Lycurgus left out the king Polydectes (Plutarch, *Lycurgus* 1.4). Simonides was active at the time of the Persian Wars and none of his poems are demonstrably later than 465 BCE (Molneux 1992). This lends further indirect support to the notion that the genealogies reported in Herodotus entered circulation within a decade or so of 470.

Once the Spartan royal genealogies had achieved widespread recognition, they could also be put to a different chronological purpose – determining the number of *years* between various persons or eras. All that was required for such calculations was a rule for converting a given generational count into a specific number of years. The oldest surviving rule given by a historian is Herodotus' statement that there are three generations to a century (2.142).[23] What Herodotus' statement leaves unclear is how to tally the years when the generational counts are not multiples of three – that is, when 1 or 2, 4 or 5, 7 or 8, etc., generations are involved. Based on a study of dozens of cases, all presented in this book, I would argue that, absent more specific indications of time span, year counts were always rounded up, and always to the nearest decade; thus, the year tallies corresponding to successive generation counts would follow what we might call the 40–70–100 rule, like so:

1 generation	40 years
2 generations	70 years
3 generations	100 years
4 generations	140 years
5 generations	170 years
6 generations	200 years
7 generations	240 years
8 generations	270 years
9 generations	300 years

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[23] The philosopher Heraclitus previously spoke of 30-year generations (Plutarch, *On the Failure of the Oracle* 415e, Censorinus, *The Day of Birth* 17.2). This figure was probably chosen to match the rounded number of days in a lunar month, since Heraclitus multiplied it by 360, the rounded number of days in a solar year, to create a cosmic cycle; cf. Fränkel 1938.

etc.

These assumptions receive their validation from the sheer number of problems which they help to resolve. Indeed, we may go so far as to speak of this as a fundamental rule of Greek chronology: always convert generations to year counts using the 40-70-100 rule.

Let us consider a few early instances of such reckoning in action. In the opening chapters of his history Thucydides locates the beginning of the era of Sparta's good government "about 400 years and a little more before the end of the present war" (1.18.1). This is an obvious allusion to Lycurgus' reorganization of Spartan society; and indeed, if we count back the kings of the Eurypontid line from Archidamus II (ca. 476 to 427 BCE) to Charilaus, under whose reign Lycurgus' reforms were first implemented, we reach the number twelve, i.e. 400 years. Thucydides' figure was thus determined by counting the years in twelve generations using the three-generations-per-century rule; his qualification, "and a little more" would cover the reign of Archidamus' successor, Agis II, who was still alive when the historian was writing.[24] Another example from Thucydides is to be found in the Melian dialogue, where the islanders lay stress on their Spartan roots and boast of a liberty enjoyed for 700 years (5.112.2). It would certaintly be a remarkable coincidence if the Athens sought to enslave Melos in the very year of that community's septuacentennial. In fact, it is much more likely that 700 years is a conventional number, a conversion of the 21-generation genealogies into years, which reflected Melian perception of themselves as Spartans abroad. The figure 700 years is similarly employed for

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[24] Mosshammer 1979, 179, speculates that Thucydides might have known of the synchronism of between Lycurgus and Homer and borrowed Herodotus' dating of the latter to a time 400 years in the past. Simply counting the generations would have been a simpler and more obvious approach for the historian to take.

rhetorical purposes in Isocrates: in the *Archidamus*, which was delivered in 366, Sparta's prime is said to have lasted 700 years (12); in the *Peace*, delivered in 355, we read that Sparta held together for 700 years until its near collapse after the battle of Leuctra in 371 (95); in the *Panathenaea*, a work finished in 339, Isocrates wrote that "the Spartans have occupied their land for no more than 700 years" (204). If taken literally these figures might seem to imply that Isocrates knew three different dates for the foundation of the Spartan polity: 1070, 1065, and 1038. But the idea that antiquarian research during Isocrates' lifetime kept yielding different estimates for the return of the Heraclids is of course absurd. The figure 700 was nothing more than an approximate span based on four ingredients: the Spartan royal genealogies, with their 21 generations; the subtraction of five generations of Heraclids; the addition of the five generations that had passed since the Persian Wars; and the equation of three generations with one century. Many years later Cicero, who was deeply steeped in Isocrates, was still citing the 700-year figure (*For Flaccus* 63).

The scholar Eduard Meyer argued that early Greek historians like Hecataeus treated all generations as 40 years in length, so that G generations would be counted as $G \cdot 40$ years.[25] His article on the topic has had a rather unfortunate influence, since it encouraged scholars to consider whether there might be other years-per-generation rules (23 years? 35?) lurking beneath different chronological systems and experiment with combinations that would show this to be the case.[26] The shortcomings in Meyer's arguments have been pointed out by Robert Fowler and others, and one of my aims in this chapter is to put it to rest once and for all by showing that the three-generations-per-century rule, with rounding, was the only rule that chronographers

[25] Meyer 1892.
[26] For example Prakken 1943, 95–100, Miller 1970. Contra, see Mosshammer 1979, 114/5.

used.[27] A crucial piece of evidence that seems to support Meyer's thesis is Thucydides' statement that the Heraclids returned to the Peloponnesus 80 years after the capture of Troy.[28] Since the figure 80 cannot be a rounded-up version of 66 2/3 years, one might think of it as the count of years in two 40-year generations. However, such a conclusion is at odds with the lore surrounding the Heraclids. Herodotus, author of the oldest surviving account, describes how Hyllus the son of Heracles fought a duel with Echemus of Tegea on the following condition: a loss by Hyllus meant the Heraclids would make no further effort to invade the Peloponnessus for 100 years; Hyllus was then killed (9.26). A century span implies three generations, and the tradition recorded by Herodotus and others is consistent with this, indicating that after Hyllus' death it took three generations for the Heraclids to complete their conquest. For Meyers' thesis to be correct, Thucydides would have had to assume two generations of Heraclids after Hyllus; yet all the texts that we have specify three.

In fact, an alternative account of the return which superseded Herodotus' contains all the elements that are required to explain the 80-year interval. In this version, related in part by Diodorus (*Library of History* 4.58.3) and more fully by the mythographer Apollodorus (*Library* 2.8.2/3), the agreement Hyllus makes before his death sets the length of the moratorium at 50 years, not 100. Once the moratorium is over, a second attempt is at once made by his grandson Aristomachus, which ends with Aristomachus' defeat. As soon as his three sons Aristodemus, Temenus, and Cresphontes "reach the age of manhood," i.e. turn twenty, they consult Delphi about their father's lack of success and are set straight, receiving information about their invasion route. Another setback then occurs which delays them another ten years; it is

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[27] Fowler 1996, 74/6, Burkert 1995, 143/4.
[28] Thucydides 1.12.3/4, Meyer 1892, 179–182. Discussed in detail by Prakken 1943, 66–69.

only after this decade expires that the Heraclids finally succeed in occupying the Peloponnesus, with Aristodemus' twin sons Eurysthenes and Procles becoming the first two kings of Sparta. This gives us a total of 50 + 20 + 10 = 80 years from Hyllus's death to the Return, as calculated from the intervals spelled out in the story. Since Thucydides surely did not come up with this interval on his own, he must have taken it from an earlier mythographer. The most obvious candidate would Hellanicus, who fits chronologically between Herodotus and Thucydides and would be a natural source for Diodorus and Apollodorus to have used.

THE SPARTAN EPOCH

Let us now consider how a Greek chronicler might date the Trojan Era – or, to speak more accurately, since there was no system in terms of which such a date might be expressed, how they might determine the number of years that had passed between the sack of Troy and events in later centuries. The genealogical framework we have just reconstructed would allow such an estimate to be made with little difficulty. Since Heracles was active one generation prior to the Trojan War, and his son Hyllus during it, Hyllus' death can be synchronized with the fall of Troy. The Spartan Genealogy counts twenty generations from Hyllus to Leonidas inclusive. By the usual reckoning this would put Troy's fall 670 years before Xerxes' invasion; and since that invasion was launched in 481 BCE, the Homeric war's end should date to 1150. Because this calculation presupposes use of the Spartan genealogy, I will call this the Spartan epoch for the fall of Troy.

   As we shall see, at least nine scholars from the fifth, fourth, and third centuries BCE employed this method, or something very much like it, for dating the destruction of Troy. The earliest figure we may

confidently assert did so was Democritus of Abdera. Although best known for his atomistic philosophy, Democritus was a polymath whose interests ranged widely over topics as diverse as ethics, epistemology, zoology, and astronomy. Somewhere in his *Short Cosmology* he wrote that 730 years had passed from the sack of Troy to the date of that work's completion.[29] Based on Apollodorus' date for Democritus, Hermann Diels conjectured that he published this work when he was 40 years old, in 421; this would put his Trojan epoch in the year 1150.[30] It is hard to imagine any calculation giving rising to this date other than the method outlined above. Note the implication that Democritus used the rounded figure 670 for the number of years in twenty generations: 481 + 670, inclusive, = 1150.

For Democritus, the 730-year interval between Troy's fall and his own day was itself significant. Several astronomers from the fifth-century BCE, including Oenopides, Philolaus, Meton, and Democritus himself, suggested parameters for so-called 'great years': periods that contain, to a high degree of approximation, both an integer number of solar years and an integer number of lunar months.[31] Oenopides and Philolaus both proposed great years that were 59 solar years long.[32] Oenopides equated this period with 730 lunar months; Philolaus proposed the figure 729, one month less, probably in order to produce a more numerologically pleasing figure, since $729 = 3^5$.[33] As it happens, Democritus was said to

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[29] For Democritus' chronology see Thibodeau 2019, 187–201, and Mansfeld 1983.

[30] Diels 1876, 30n3.

[31] van der Waerden 1952, Samuel 1972, 33–49.

[32] Oenopides: Censorinus, *The Day of Birth*, 19.2, Aelian, *Miscellaneous History* 10.7; Philolaus: Censorinus 18.8, 19.2. For discussion see Huffman 1993, 276–279, and Samuel 1972, 41/2.

[33] This cycle can easily be derived from crude estimates for the length of the solar year and the lunar month. Suppose one assumes that a solar year contains 730 days and nights (the equivalent of the 365 day Egyptian year) and a lunar month, 59 days and nights (since the lunar month is, to a high degree of approximation, 29.5 days long). It is trivially obvious that 59 years, each

have worked with Philolaus, and expressly mentioned Oenopides in his work.[34] It is surely no coincidence then that his measure of the period from the end of the Trojan War to his own day featured the same large number, 730, as Oenopides' great year. Now the year 421 witnessed the Peace of Nicias, which marked what contemporaries must have regarded as the end of the Peloponnesian War. Like its mythical Trojan predecessor, the great war between Athens and Sparta had gone on for approximately ten years up to that point, and was perceived by some as a kind of reinstantiation of the earlier event. So it seems likely enough that Democritus recorded the year interval, not just for autobiographical purposes, but because he thought of it as number with cosmic significance – possibly the length of a historical cycle after which major events repeat themselves.[35]

Let us now consider the origins of the sophist Hippias' date for the first Olympiad, the year we call 776 BCE; as we shall see, it has a direct link to the Spartan epoch. The Olympic epoch originally took the form not of a date but of a list of victors in the stadium race, whose starting point could be used to define the year when the quadrennial contests began. Hippias' original document probably contained an introductory account of the origins of the games, followed by a list of the names of the winners, perhaps interspersed with anecdotes about them. Paul Christesen, author of the definitive study of the victor lists, has shown

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containing 730 days and nights, will be exactly as long as 730 months, each containing 59 days and nights. Hence, a great year of 59 solar years will contain 730 lunar months.

[34] Diogenes Laertius, *Lives* 9.38, 41.

[35] This would be a more intellectualized version of the notion, clearly articulated by Thucydides (1.8–12), that the Trojan War was a touchstone against which the Peloponnesian War should be measured. Democritus would have been acquainted with the early Pythagorean notion that all events repeat themselves (Dicaearchus via Porphyry, *Life of Pythagoras* 19, Eudemus via Simplicius, *On Aristotle's Physics* 4.12, 732.23), and postulated an atomistic version of this idea (Cicero, *Academica* 2.55) quite similar to Nietzsche's notion of the Great Return.

that Hippias composed this document shortly after 400, most likely in the immediate wake of a dispute between Sparta and Hippias' native city Elis over control of the games.[36] Since the period in question was the 95th Olympiad, his victor list would have contained 95 names. The date of the first Olympiad was implicit in this figure; it lay 95 · 4 = 380 years prior to the 96th Olympiad in 396. So the question we need to answer is how did Hippias know how long this list should be. Why 95 winners instead of 83 or 97 or 201?

The most obvious response – that Hippias was drawing on official Olympic records – is at odds with all that we know about record-keeping in the early archaic era. The Greeks did not begin making written records of public officials until around the middle of the sixth century, more than two centuries after the Olympic games are supposed to have started.[37] There may well have been extensive oral memories of earlier winners, but these would have reached Hippias' ears from multiple oral sources – aristocratic families, mainly – whose victor lists surely would not have been mutually consistent. Plutarch himself notes that Hippias' list of names was based on "nothing that inspires confidence" (*Numa* 1.4). So, since the total was not a given, the decision to stop at 95 names was one Hippias made by himself. What then were his grounds for stopping at that point?

The answer is quite simple. Let us start with the interval separating 1150 BCE, the Spartan epoch for the fall of Troy, from the period when Hippias was writing, sometime between 400 and 395. Now divide it in half. The midpoint is a single year when the interval is an odd number of years long, or either of two years when the interval is an even number of years long:

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[36] Christesen 2007, 46–57.
[37] For a thorough examination of the subject of Hippias' sources and the genesis of his list, see Christesen 2007, 73–160.

Trojan epoch	Hippias' date	Interval	Middle Year
1150 BCE	400 BCE	751 years	775 BCE
1150	399	752	775 or 774
1150	398	753	774
1150	397	754	774 or 773
1150	396	755	773

Regardless of when Hippias was writing during this span, the year halfway between Hippias and the fall of Troy falls neatly within the period, 776 to 773, which Hippias designated as the first Olympiad. Alternatively, we can define an interval that begins with the notional date for the return of the Heraclids – 1071, 80 years after the fall of Troy in 1150 – and ends with the year of Xerxes' invasion, 481. The midpoint of this interval is 776, the very first year of the first Olympiad. It seems altogether likely then that Hippias determined the date of the first Olympic games by dividing the interval between two epochal events in half; he may even have noticed that the date was overdetermined, since it was the midpoint of two different long spans. Because the Spartan epoch for the capture of Troy formed the upper bound or the basis for the upper bound of the long intervals, Hippias' recognition of this epoch seems assured.

The Spartan epoch for Troy's fall makes another appearance in the work of Ctesias of Cnidus. Ctesias served as court physician for Artaxerxes II around 400 BCE and drew on the lore which he learned while living at the court to write a history of the Near Eastern kingdoms which had Persia at its center. While judged unreliable by modern historians, for most ancient readers this was the definitive narrative of the early Near East, filling out and in some cases correcting Herodotus'

account.[38] Included in its pages were enumerations of the kings of the Persians, Medes, and Assyrians. The Assyrian *logos* is the one that interests us here, because of the synchronism Ctesias drew between the Assyrian king Tautanes and the capture of Troy. This synchronism was based on the identification of Tautanes with the Teutamus mentioned in *Iliad* 2.843; our sources for Ctesias sometimes refer to the king by the latter name. According to the story, Tautanes was responsible for dispatching Memnon of Aithiopia and his army to assist Priam in his war against the Achaeans.

There are multiple versions of Ctesias' Assyrian history which differ in ways that need to be sorted out before we can put dates to individual kings. One is the king list which Eusebius presented in his *Chronography* and incorporated into his *Canons*; in addition, the second book of Diodorus Siculus's *Library of History* contained a discursive summary of Ctesias' remarks on the Assyrian kingdom.[39] The latter text has come down to us through three different channels: the medieval manuscript tradition of Diodorus, quotations of Diodorus in the Armenian translation of Eusebius' *Chronography*, and quotations found in Syncellus, who was also relying on Eusebius for his Diodorus quotes.[40] These sources differ about the place that Teutamus/Tautanes and the famously decadent regent Sardanapallus occupy in the king list. According to Eusebius's *Canon* list, Teutamus was the 26th king of Assyria while Sardanapallus was the 36th and last king. According to Diodorus, as transmitted by Eusebius and Syncellus, Teutamus was the 26th king and Sardanapallus was the 35th. Finally, the vulgate tradition for Diodorus make Teutamus the 20th king and Sardanapallus the 30th.

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[38] For an excellent introduction, see Stronk 2010.

[39] Eusebius, *Chronography*, 30.30–32.8 Karst. The entries in the *Canons* can be found at the relevant dates throughout Jerome's text (cf. Helm 1913).

[40] Diodorus Siculus, *Library of History* 2.21.8–23.1; Eusebius, *Chronography* 27.10–28.24; Syncellus, *Chronography* 194.

	Teutamus	Sardanapallus
Eusebius	26th	36th
Diodorus (Eusebius/Syncellus)	26th	35th
Diodorus (medieval mss.)	20th	30th

The figures 36, 35, and 26 ought to be preferred for two reasons: (1) they are *lectiones difficiliores* relative to the round numbers 30 and 20, and (2) the text of Diodorus that Eusebius made use of in 300 CE would have been nearly seven centuries older than our earliest surviving Byzatine manuscripts, which date from the tenth century; it would thus have been much closer to the original.

Resolving this conflict still leaves us with another discrepancy, since Eusebius list contains 36 Assyrian king names, one more than Diodorus' 35. Because Eusebius and Diodorus agreed in making Teutamus 26th in line, the extra king must have been one of ten who followed. So the question arises, which figure in Eusebius' list has been added? The names are spelled out below. The two most likely candidates for additions are the doublets with conventional Greek endings, Teutaeus and Ophrataeus. Jan Boncquet and others have identified Ophrataeus as the intruder for reasons relating to the reported lengths of the Assyrian empire.[41] I would second this identification and add two more arguments in support. First, once Ophrataeus is eliminated, the regnal spans in Eusebius's list put the last year of Teutamus' reign in 1150, the Spartan epoch. Second, this hypothesis makes Eusebius's motive for adding a king clear: to preserve the synchronism between Teutamus and the fall of Troy within Eratosthenes' chronological system. Once Ophrateus' twenty years are added, Teutamus' reign spans the years 1201 to 1170 and embraces the 1184 epoch. By contrast, if Ophrateus

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[41] Boncquet 1990, 8/9.

was part of Ctesias' original roster and Teutaeus had been the addition, his predecessor's Teutamus' reign would be pushed too high (1221 to 1190) to contain the 1184 date.[42]

I give here Ctesias' Assyrian king list with Eusebius's inferred additions shown in brackets. The absolute dates have been reconstructed from the statement that the fall of the Assyrian empire at the end of Sardanapallus' reign took place 40 years before the first Olympiad. Ctesias, it would appear, synchronized the last year of Teutamus with the sack of Troy, placing both in 1150 BCE, the Spartan epoch.

Ctesias' Assyrian King List, Teutanes through Sardanapallus

Number	Name	Reign	Dates
26th	Teutanes	32 years	1181 to 1150 BCE
	"Under whom Troy was taken."		
	Sack of Troy		**1150**
27th	Teutaeus	40	1149 to 1110
28th	Theneus	30	1109 to 1080
29th	Derusus	40	1079 to 1040
30th	Eupalmes	38	1039 to 1002
31st	Laosthenes	45	1001 to 957
32nd	Peritiades	30	956 to 927
[33rd	Ophrataeus	20]	
33rd [34th]	Ophatanes	50	926 to 877
34th [35th]	Acrazanes	42	876 to 835
35th [36th]	Sardanapallus	20	834 to 815

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[42] It is interesting to note that the historian Abydenus, ca. 200 CE, made the interval between the death of Sardanapallus and the first Olympiad 67 years long instead of 40 (Eusebius, *Chronography* 26.6); this may have represented another attempt to accommodate Ctesias' reigns and the Teutamus/Troy synchronism with Eratosthenes' epoch.

> "From Sardanapallus [sc. his last year] until the first Olympiad there are 40 years."

In addition to Democritus, Hippias, and Ctesias, the historian Ephorus of Cyme also subscribed to the Spartan epoch. Ephorus began his influential history with an account of the Return of the Heraclids.[43] He dated the recovery of their ancestral homeland 735 years before the start of Alexander's imperial adventure in 335 BCE (Clement, *Stromata* 1.21.139):[44]

> "There are 1828 years from Cecrops to Alexander of Macedon, 1250 years from Demophon, and from the capture of Troy to the Return of the Heraclids, 120 or 180 years. From this to the archonship of Euaenetus, in whose time they say Alexander crossed into Asia, there are 715 years according to Phaenias, 735 years according to Ephorus."

The most obvious way for Ephorus to have arrived at this dating was to count off from the Spartan epoch the 80 years that the Return was supposed to have taken; hence Troy fell a total of 735 + 80 = 825 years before Alexander's conquest. This works out to 1149 by inclusive counting, 1150 by exclusive. Early authorities like Ephorus tended to reckon inclusively; yet Democritus and others whom we shall be meeting shortly assumed that Troy fell in 1150, not 1149, and it is hard to see why Ephorus would be an outlier. One way out of this quandry is to note the reference in Clement to Demophon, the king of Athens after

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[43] Diodorus Siculus, *Library of History* 4.1.3, 16.76.5. Ephorus has not received a monograph-length treatment in English since Barber 1935; for a good recent introduction, see Pownall 2004, chapter four.

[44] Diodorus (16.76.5) gives the figure as 750 but adds "nearly," which shows that he is rounding up; there is no need to emend the text, as Jacoby does, or call this a contradiction; cf. Prakken 1943, 78.

the fall of Troy, being alive "1250 years," presumably before present. From this we can infer that Clement's source was a writer from the Roman era. Since scholars after Eratosthenes tended to count exclusively, we may atribute the figure 735 to this source, regard it as exclusive, and infer that Ephorus' original date was 1150.

Sometime in the middle of the fourth century the city of Sicyon came to believe that its early rulers could be traced back further in time than those of any other Greek city-state.[45] This tradition appears to have first been codified in a public inscription which adumbrated the city's long past and gave the names and year counts of its rulers. Its contents were worked up into a narrative by the historian Menaechmus of Sicyon, a shadowy figure who was active in the second half of the fourth century. Castor of Rhodes knew a version of the Sicyonian king list which must have gone back to Menaechmus – there were no other early historians of Sicyon – and Eusebius reproduced this in his *Chronography*. I give here the portion of the list that covers the last two kings together with the seven priests who followed them and served as heads of state.[46] Accession dates can be calcuated based on the notice that the last priest, Charidemus, entered office 352 years befor the first Olympics.

The Sicyonian King List (Castor/Eusebius/Jerome)

	King (K) or Priest (P)	Reign	Accession
Pelasgus	K	20	1211 BCE

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[45] Christesen 2007, 316, and 514–518.
[46] 82.29–83.8 Karst. The reigns of the kings Polypheides, Pelasgus, and Zeuxippus are secured by the agreement between Jerome's canon and the Armenian of the *Chronography* regarding their length; the reigns of the priests are preserved only in the Armenian version.

Zeuxippus	K	31	1191
Archelaus	P	1	**1160**
Automedon	P	1	1159
Theoclytus	P	4	1158
Euneus	P	6	1154
Theonomus	P	9	1148
Amphigyes	P	12	1139
Charidemus	P	1	1127

> "(Charidemus) could not bear the expense, and went into exile. He was priest 352 years before the first Olympiad."

Putting this document in context is a thumbnail history of legendary Sicyon preserved by Pausanias (2.5.6–6.7). This gives the kings in the same order as Eusebius but with the omission of several names, such as Pelasgus. Because Pausanias' list appears to reflect an older stratum in the tradition, Pfister and Jacoby have argued, quite plausibly, that it was based on the original register published at Sicyon, or perhaps a source that knew the register, and that Castor's list, with its added names, must have been taken from Menaechmus.[47]

The list and the narrative in Pausanias both indicate that Zeuxippus was the last king of Sicyon. To explain why the monarchy lapsed, Pausanias tells us that Zeuxippus' designated successor, Hippolytus, was conquered by Agamemnon and reduced to vassal status (2.6.7); henceforth Sicyon only had priests. Sicyon is part of Agamemnon's dominion in the *Iliad* (2.572) and the Trojan War was of course the last war Agamemnon ever fought; according this conquest must date before the war. Now in our list, the year of Archelaus, the first Sicyonian priest, falls immediately before 1159 BCE, which is the first year of the Trojan War if one assumes the Spartan epoch. The timelines of Pausanias and

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[47] Pfister 1913 and Jacoby 1923–1958, 2d: 819–821.

the king list agree on this point, and their agreement tells us that the objective dates in the list were established by anchoring them to the Spartan epoch. Since the Spartan epoch was the norm during the period, ca. 400 to 350, when the inscription was first published, we may assign this list of king names and reigns to it. In short, the original author of the Sicyonian list subscribed to the Spartan epoch. There is more information about the Trojan epoch which can be extracted from this document, but discussion of that will have to wait until the section on the Attic-Sicyonian epoch.

Another member of the Spartan epoch club was the obscure scholar Artemon of Clazomenae. Little is known about Artemon save that he recorded the story of a winged pig which once harrassed the inhabitants of his native city (Aelian, *The Nature of Animals* 12.38) and wrote about Homer. Our only evidence for the latter is the following entry from the *Suda*:

> Arctinus: the son of Teleus, descendant of Nautes, from Miletus, a student of Homer, as Artemon of Clazomenae says in his work on Homer, who was around in the ninth Olympiad, 410 years after the Trojan epoch." ('Arktinos', *alpha* 3960)

Since the ninth Olympiad spanned the years 744 to 741 BCE, this dating puts the fall of Troy somewhere in the period 1153 to 1150; the intended year can hardly be anything other than 1150, counted inclusively.[48] Artemon's use of the Spartan epoch provides us with a *terminus ante quem* for his work, which ought to predate Eratosthenes.

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[48] For speculation as to how Arctinus came up with this date, see chapter 22.

The latest in time of the various historians who used the Spartan epoch seems to have been the Egyptian priest Manetho, who composed a history of his native country, the *Aegyptiaca*, in the age of the early Ptolemies.[49] Manetho's narrative was organized as a chronicle running from primordial times to his own day that related the events of each pharaoh's reign and indicated the length of his rule. While the original was lost, a list of kings and regnal spans derived from it was independently preserved. This list is a document of central importance for Egyptology, and it also plays an important role in revealing the chronology of other Near Eastern kingdoms.[50] Its utility is hampered somewhat by the fact that two different versions of it have come down to us, which share most of the pharaohs' names but differ over their reigns. One list is preserved in the universal chronicle of Syncellus, who identifies his source as Julius Africanus, the first major Christian chronographer, active in the first half of the third century CE. The second is the list Eusebius reproduced in his *Chronography* and used for the Egyptian entries in his *Canons*. Below I have reproduced the regnal spans from Africanus, via Syncellus, and Eusebius, via Jerome's version of the *Canons*.[51] The absolute dates here have been determined by starting with Cambyses' conquest of Egypt in 524 BCE (Eusebius' date; the actual year was 525), then counting back reigns to Thuoris, who "was king when Menelaus visited," one year after the fall of Troy.

Two things quickly emerge from a comparison of the rosters. For one, Africanus' list is more complete than Eusebius', since it includes six

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[49] For an introduction to Manetho, see the fine study by Dillery 2015; the translation and commentary by Verbrugghe and Wickersham 2001 is also very helpful.

[50] Egyptian chronology remains a fiendishly complicated subject, with no shortage of controversies; for an excellent introduction, see Hornung et al. 2006. Its implication in the chronology of the kingdoms of southwest Asia and the eastern Mediterranean is treated in Bietak and Czerny 2000.

[51] Eusebius, *Chronography* 68.17–69.12 Karst, Syncellus, *Chronography* 80–84.

minor and anonymous pharoahs whom the latter does not mention, as well as the half-year reign of Psammecherites. Second, according to Eusebius' list Menelaus was in Egypt between 1188 and 1182 BCE, if we follow the *Canons*, or between 1183 and 1176, if we follow the *Chronography*. Menelaus' visit to Egypt in the reign of Thuoris has clearly been made to fit Eratosthenes' epoch – either 1184, the original epoch, or 1182, the date Eusebius used. By contrast, Africanus' list puts Menelaus in Egypt between the years 1151 to 1145. The latter dating points to an authority who followed the Spartan epoch, and therefore predates Eratosthenes – Manetho, surely. Observe as well that the notice which puts the first Olympiad in the reign of Petubastis is at odds with Eusebius' chronology but fits the timeline of Africanus' list. This affords strong support for the idea that the notices attached to various pharaohs in Africanus' text go back to Manetho himself.[52]

	Africanus/Syncellus		Eusebius	
	reign	accession	reign	accession
Thuoris	7	1151	7	1189 or 1183
"Homer calls him Polybus, the husband of Alcandra, and in his reign Troy was captured."				
[Fall of Troy		**1150**		**1184 or 1182**]
[Menelaus in Egypt		1149		1183 or 1181]
20th Dynasty	135	1144	178 or 172[53]	1182 or 1176
Smendis	26	1009	26	1004
Psousennes	46	983	41	978
Nephelcheres	4	937	4	937
Ammenophthis	9	933	9	933

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[52] On the authenticity of the notices, see Dillery 2015, 97–117.

[53] The notice in Jerome's *Canons* gives 176 years, the Armenian *Chronography*, 172 years. Either could be correct within Eusebius' system.

Osochor	6	924	6	924
Psinaches	9	918	9	918
Psusennes	14	909	35	909
Sesonch[os]is	21	895	21	874
Osorthon	15	874	15	853
"3 others"	25	859		
Tacelothis	13	834	13	838
"3 others"	42	821		
Petuba[s]tis	40	779	25	825

"In his reign the Olympics were held"

Osorthon	8	739	9	800
Psammus	10	731	10	791
Bocchoris	6	721	44[54]	779
Sabachon	8	715	12	735
Sebichus	14	707	12	723
Tar[a]cus	18	693	20	711
Amerris			12	691
Stephinat[h]is	7	675	7	679
Nechepsus	6	668	6	672
Nechao I	8	662	8	666
Psammetichus	54	654	44	658
Nechao II	6	600	6	614
Psammuthis	6	594	12[55]	608
Vafres	19	588	30	596

[54] Eusebius seems intentionally or unintentionally to have made a change here, entering the total length of the preceding dynasty, 44 years, as the length of Bocchoris' reign. Jerome's *Canons* contain a further error, since they assign Bocchoris 44 years in the notice but only count off 42 years in the tables.

[55] The Armenian version of the *Chronography* assigns Psammuthis 17 years and Vafres 25. Since this yields the same combined total, 42 years, as the figures in Jerome's *Canons*, it does not affect any of the accession dates above or below.

Amosis	44	569	42	566
Psammecherites	½	525		
Cambyses	6	524	6	524

Eusebius and Africanus were both ultimately dependent on Manetho; nevertheless, Eusebius seems to have tinkered with the list in order to make Menelaus' visit to Egypt consistent with Eratosthenes' epoch. Africanus thus emerges as the superior witness, and an extremely faithful one at that. As we have seen, the Spartan epoch was consistently placed in 1150 BCE, and Manetho would have had no reason to invent a different date. The fact that the accession of Thuoris falls in the year 1151 – or even 1150, if Psammecherites' half-year is rounded down – suggests that all of the intervening year counts repeat those originally given by Manetho with essentially no errors.

TWO MODIFIED SPARTAN EPOCHS

Sosibius of Sparta was a contemporary of Ephorus who composed an annalistic history of Sparta known variously as the *Chronica* or *Anagraphe Chronicon*.[56] According to Censorinus he placed the sack of Troy 395 years before the first Olympiad, in the year we would call 1170 BCE. This is twenty years earlier than the Spartan epoch of 1150. To explain where this date came from we need to consider some of the other testimonia for Sosibius, in particular one fragment that gives the length of the reigns for three Spartan kings (Clement, *Stromata* 1.21.117):

"Sosibius of Laconia in his *Register of Times* puts Homer in the eighth year of the kingship of Charillus the son of Polydectes. Now

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[56] For a good overview of this mysterious figure see Lévy 2007.

Charillus was king for 64 years, after which his son Nicander ruled for 39 years; and Sosibius says that the first Olympiad was established in the 34th year of the latter. Hence Homer would be about 90 years before the establishment of the Olympics."

Thanks to the mention of the first Olympiad here there are quite a few absolute dates that can be extracted from this passage:

Polydectes (death)	874 BCE
Charillus 1 (accession)	873
Charillus 8 (Homer)	866
Charillus 64 (death)	810
Nicander 1 (accession)	809
Nicander 34 (Olympiad 1.1)	776
Nicander 39 (death)	771
Theopompus 1 (accession)	770

It is intriguing to find the date for Theopompus, the king who led the Spartans to victory during the first Messenian War, falling exactly 400 years after the capture of Troy. To explain this coincidence I would posit that Sosibius placed several key epochs in Spartan history a fixed number of centuries before the battle of Leuctra in 371, the epochal event which broke Sparta's Peloponnesian empire. In chapter seven I will make the case that Sosibius placed the institution of the Spartan festival of the Gymnopaediae along with the end of the second Messenian war and several other events in or very close to the year 670. Thus we can reconstruct a system that looks like this:

Sack of Troy	1170 BCE	800 years before Leuctra
Theopompus' Accession	770	400 years before Leuctra

End of 2nd Messenian War, 1st Gymnopaediae, etc.	670	300 years before Leuctra
The Battle of Leuctra	371	

To draw up his Laconicentric chronology, Sosibius would likely still have used the three-generations-per-century rule and a Spartan king list (the Eurypontids, who had three kings during the 110 years between Thermopylae and Leuctra), but counted back from the defeat at Leuctra rather than Xerxes' crossing.

Now that we know Ephorus' Trojan epoch and have a sense of Sosibius' timeline, we can assign authorship to a Spartan king list preserved in the Armenian translation of the *Chronography* of Eusebius.[57] Eusebius identifies Diodorus Siculus as his source, but since the list employs the Spartan epoch for Troy, it must go back to a source older than Eratosthenes. In contrast to Herodotus' mixed lists of forefathers and kings, this was a true Spartan king list which indicated the length of individual reigns. The Agiad sequence ends with king Alcamenes, whose tenth year is synchronized with the first Olympic games; using this as a starting point we can convert its regnal spans into accession dates. In his *Canons* Eusebius ignores this synchronism with the first Olympiad and instead identifies the first year of Eurysthenes with 1104, Eratosthenes' date for the Return of the Heraclids; this has the effect of moving all the accession dates up by more than three decades. Since what interests us here is the chronology of the original list, I have anchored the dates to the first Olympiad.

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[57] The list has been subject to much scrutiny, and various attempts to harmonize it with Herodotus' royal genealogies; see e.g. Chrimes 1949, 319–347, Huxley 1962, 117–119, Den Boer 1954, 65–69, 82–88.

There are minor differences between the reigns reported in the *Chronography* and Jerome's version of the *Canons*, and so I have reproduced both below.[58] Note that Labotes, Dorysthus, and Agesilaus are the same as Leobotes, Doryssus, Hegesilaus in Herodotus:

Agiad King List

	Chronography (Armenian)		*Canons* (Jerome)	
	Reign	Accession	Reign	Accession
Eurysthenes	42	**1069 BCE**	42	1073
Agis	1	1027	1	1031
Echestratus	31	1026	35	1030
Labotes	37	995	37	995
Dorysthus	29	958	29	958
Agesilaus	44	929	44	929
Archelaus	60	885	60	885
Teleclus	40	825	40	825
Alcamenes	38	785 to 748	37	785 to 749

"In the tenth year of his reign, the first Olympiad was established."

There is also a list of Eurypontid kings in the *Chronography*, which appears to be missing two or three entries. With the exception of Procles, all of the kings are assigned the same number of years in both texts. Charicles and Eunomius correspond to Herodotus' Charilaus and Eunomus:

Eurypontid King List

	Reign	Accession	
Procles	49 years		(51, *Canons*)

58 105.24–31, 105.32–106.6 Karst.

[Sous?]		
[Eurypon]		
Prytanis	49	
Eunomius	45	
[Polydectes]		
Charicles	60	883 BCE
Nicander	38	823
Theopompus	47	785 to 739

"The first Olympiad occurred in the tenth year of his reign"

According to the timeline of the legendary narrative, Eurysthenes' accession should correspond to the year of the Heraclids' Return. (This was the synchronism Eusebius used in his tables.) The date for the Return in a system that posits the Spartan epoch ought in turn to be 1150 BCE – 80 years = 1070. This nearly matches the date for Eurysthenes' accession, 1069, that emerges from the reigns given in the *Chronography*; thus we should prefer its figures to those in the *Canons*, which entail a date for the Return that is three years too high.

Now the Eurypontid list puts the start of Theopompus' reign in the 780's BCE. This tells us that these dates do not go back to Sosibius, who treated 770 as the year of his accession. Ephorus was the only other early historian of note to work on the chronology of Sparta and subscribe to a Spartan epoch for Troy. His date for the Return was 1070, a near match with 1069 in our list. Ephorus was also one of Diodorus Siculus' primary sources. As a result, these intervals and this dating system can hardly be ascribed to anyone but him.[59]

The Peripatetic scholar Phaenias of Eresos composed a number of historical and literary studies, including a chronicle entitled the *Prytanies*

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[59] Timaeus worked on Spartan antiquities, but followed a different epoch; see below page 62.

of Eresos.[60] From Clement we learn that he dated the Return of the Heraclids to 1050 BCE.[61] If we count 80 years back from this date to the fall of Troy we reach either 1130 or 1129, which are twenty and twenty-one years lower than the Spartan epoch.

At first glance this seems rather puzzling. What could motivate such a downdating? To resolve this puzzle we must have recourse to another chronographic document. Phaenias provided a chronology for the poets Terpander and Archilochus which agrees with the one found on the Parian Chronicle; as other scholars have noted, this agreement raises the possibility that additional data from the Chronicle could also go back to his work.[62] Now the Chronicle's system of absolute dates for the legendary period is higher than Phaenias's since it assumes a Trojan epoch 1208 BCE, nearly eighty years higher; we will explore the reasons for this later in the chapter. However, in addition to dating the fall of Troy using years-before-present, it also provides dates in the reign of Menestheus, who was the king of Athens from the start of the war onward (cf. *Iliad* 2.546–552). These are the entries in question (A.38, 39):

"Since the time when [the Gree]ks [brought] their army to Troy, 954 years, in the thirteenth year of [Men]estheus' reign at Athens."

"Since the time when Troy was captured, 945 years, in the <twenty> second year of [Mnesthe]us' reign at Athens, on the seventh day of the waning moon, in the month [Thargeli]on."

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[60] See the fine new edition by Hellman and Mirhady 2017.
[61] See page 31 for text.
[62] Mosshammer 1977.

Let us see what happens if we ignore the Chronicle's absolute dates and instead synchronize Troy's sack in 1129 with the 22nd year of Menestheus. The war's outbreak will fall in 1138, and Menestheus' accession in the year 1150 – the traditional Spartan epoch for Troy. Since Menestheus ruled for 23 years, we can reconstruct the following timeline:

1150 BCE	Menestheus 1	Accession
1138	Menestheus 13	Outbreak of War
1129	Menestheus 22	Fall of Troy
1128	Menestheus 23	Death of Menestheus

If we accept that the Chronicle's dating of Troy by the years of Menestheus goes back to Phaenias, it would appear that he did not disregard the Spartan epoch after all, but instead synchronized it with the accession of the Attic king. But why put the capture of the city in his 22nd year? That Menestheus ruled for 23 years was given by tradition. According to legend, while sailing back from Troy in the year following the sack he settled at Melos and became king there, abdicating the Athenian throne.[63] So the dates within Menestheus' reign all make sense in terms of Attic tradition, even though the absolute dates still depend on the Spartan royal genealogy. Accordingly we might best describe Phaenias as retailing a modified Spartan epoch.

DAMASTES AND THE SPARTAN EPOCH

The historian and mythographer Damastes of Sigeum, who was born near the site of Troy and was active in the last third of the fifth-century

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[63] Apollodorus, *Epitome* 6.15b, Syncellus, *Chronography* 202.

BCE, put the end of the Trojan War in the year 1150.[64] We know this, not because the date is directly attested, but because he claimed to be able to identify the precise day and month when Troy was sacked – the 23rd of Thargelion – *and* the number of days – 17 – between it and the summer solstice. It is only by assuming that he dated the sack to 1150 that we can reconstruct a method which would allow him to achieve such fabulous (albeit specious) precision. I have postponed discussion of Damastes until now, despite the fact that he was roughly coeval with Hippias, because the explication of his chronological scheme requires a bit of a detour into Greek calendrics, Meton, and the lunar-solar cycle.

The story of Damastes' discovery properly begins with his teacher Hellanicus, who also believed that he could pinpoint the day when Troy fell (Clement, *Stromata* 1.21.104).[65]

"Troy was captured… two days after the tenth of Thargelion, as Dionysius of Argos says… for Hellanicus says it was on the twelfth of Thargelion… when the moon was full: 'it was the middle of the night', the poet of the *Little Iliad* says, 'and the moon was rising bright'."

Hellanicus made his deductions from an account of the city's destruction that he had read in the *Little Iliad*, an epic supposedly composed by his fellow Lesbian, the poet Lesches of Pyrrha. Hellanicus located the sack in the Athenian month Thargelion, which roughly corresponds to the end of May and most of June in our modern calendar. That the epic identified the month by name is highly unlikely, since heroic epic eschews references to named months; even if Lesches was an exception to this rule, none of the Lesbian civil calendars had a month named

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[64] What little we know about his era and writings is reviewed by Fowler 2013, 644–646.

[65] For what follows, the most important of earlier discussions is Grafton and Swerdlow 1985.

Thargelion. But a passage from Dionysius of Halicarnassus that speaks to the dating (quoted below) says that the sack took place during harvest time, which in most of the Aegean lands began during May. It is certainly plausible that the *Little Iliad* mentioned the inception of the harvest, and that would suffice to explain Hellanicus' choice of month.

Beyond that, Hellanicus held that the city fell on the twelfth day of Thargelion. The basis for this inference was the line quoted from the *Little Iliad*. Hellanicus evidently interpreted the word "bright" to mean that the moon was full. If one assumes that the month begins after the last visibility of the lunar crescent at dawn, then full moon will correspond to the twelfth day of the month.[66]

Damastes accepted Hellanicus' identification of Thargelion as the month in question but corrected him on one point, moving it from the twelfth day of the month to the eighth day of the second half of the month, the period when the moon is waning (Plutarch, *Camillus* 19.4).

> "In Thargelion… on the seventh [*sic*] day of the waning month, which is when Troy was captured too, as Ephorus, Callisthenes, Damastes, and Malacus have recorded."[67]

Damastes is the oldest of the historians named here, followed next by Ephorus, Callisthenes, and 'Malacus'[68]; accordingly he ought to be the author of the revised chronology. While Damastes' rationale for this change is not recorded, Anthony Grafton and Noel Swerdlow have offered a persuasive reconstruction.[69] Damastes must have interpreted

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[66] Grafton and Swerdlow 1985, 213.

[67] The seeming discrepancy between the seventh or eighth day is an artifact of the variation between 29- and 30-day months in a well-regulated lunar calendar; see note 72, below.

[68] Unknown as a historian but possibly identical to the rhetorician Apollonius Malacus, 'the Soft', of Alabanda. Some editors emend to 'Phylarchus'.

[69] Grafton and Swerdlow 1985, 216.

Lesches' phrase "the middle of the night" to mean what we would call midnight, and read the phrase "was rising" to indicate that the moon had just become visible over the horizon. Such conditions are only met when the moon is in its third quarter; the moon is in this phase on the seventh or eighth day of the waning month. Damastes' reinterpretation of the evidence sufficed to persuade Ephorus and Callisthenes, as well as the author of the Parian Chronicle, all of whom gave the seventh or eighth day of waning Thargelion as the precise date for the fall of Troy. Callisthenes noted Hellanicus' and Damastes' dates, but treated the latter's as the superior interpretation of Lesches' verse (scholium to Euripides, *Hecuba* 910):

> "Callisthenes in book 2 of his *Hellenica* writes as follows: 'Troy was captured in the month of Thargelion, on the twelfth of the waxing month as some historians say, but on the eighth of the waning month according to the poet of the *Little Iliad*; for he demarcates the sack by stating that the capture happened right when 'it was the middle of the night, and the moon was rising bright'."

Damastes did not stop there. As reported by Dionysius of Halicarnassus, his dating must have contained the following bit of added information (*Roman Antiquities* 1.63.1):

> "Ilium was captured just as the harvest was ending, seventeen days before the summer solstice, on the eighth day of the waning moon in Thargelion, according to Athenian time-reckoning, *and after the solstice there were twenty more days to bring the year to completion*."

It would be utterly uncharacteristic of an early epic poem to convey this sort of precise information about the number of days remaining before solstice or year's end. Damastes must have been drawing on some further body of lore to make this inference, lore involving the calendar. When one considers that Damastes was active in the last quarter of the fifth century BCE and apparently identified the Athenian calendar system as the relevant one, an obvious candidate presents himself: the astronomer Meton of Athens.[70] On the summer solstice of 433 BCE, Meton made a public demonstration of a method that would allow the Athenians to keep their months, which were supposed to follow the lunar cycle, from falling out of step with the solar year, which defines the seasons. At the heart of this method was a 19-year cycle that indicated in which years a thirteenth or intercalary month should be added to the calendar. By making the prescribed intercalations and observing a fixed proportion of 29- and 30-day months, the Athenians could have a reliable calendar that would tell them when the month began even when clouds or other obstacles prevented them from making observations of the new moon.

A key feature of Meton's system was that it could indicate, for each year in his nineteen-year cycle, how many days separated the last conjunction of the year from the summer solstice.[71] To see why this is so, imagine a solar year and a twelve-month lunar year that both start on the same day, summer solstice. The lunar year will take 354 days to

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[70] There are a number of clear explanations of Meton's cycle; see e.g. Samuel 1972, 42–45, Bowen and Goldstein 1988, and Evans 1998, 185. Prior scholars have guessed that Meton's cycle must have some relevance to Damastes' dating, but were unable to draw an exact link because they assumed that Damastes would have dated Troy's fall to 1184 BCE, like Eratosthenes did; cf. Böckh's effort discussed by Grafton and Swerdlow 1986, 214/5.

[71] Conjunction occurs when the moon overtakes the sun in its orbit, passing just north or just south of it, or directly over it during a solar eclipse; on the day when it occurs, and for about a day before and afterward, the moon is invisible to the naked eye. On modern wall calendars conjunction is often referred to as 'new moon', but the latter term is best reserved for the first visibility of the moon after conjunction.

reach completion, while the solar year will take 365¼ days, so that the solstice will occur and the year will end 11¼ days after the last lunar conjunction. At the end of the second year the difference will be approximately 22½ days, and at the end of the third the difference will be 33¾ days, which is more than one lunar month – hence the need for an intercalated month, to make up for the accumulated difference. But because a regular civil month is either 29 or 30 days long, the next cycle will start out with the solstice 3¾ or 4¾ days ahead. These differentials will climb and then fall, with each intercalation, like the pile of sand in the bottom of an hourglass, in a predictable numerical pattern. It is only at the end of Meton's nineteen-year cycle that, thanks to the correctly applied intercalations, the differential will return to zero and the lunar month and the solar year will fall on the same day again. At that point the cycle repeats itself and will continue to do so *ad infinitum*. Or so it will in theory; in actual practice further adjustments are needed to keep the lunar and solar calendars in rough harmony over the long term, something that the astronomer Callippus realized about a century later. In Meton's day, however, there was no reason to think that his cycle was anything but perfect, or that the same pattern of differentials would not repeat themselves every nineteen years whether one went forward or backward in time.

The Athenian year began or was supposed to begin with the first lunar conjunction after the summer solstice. This was the first day of Hecatombaion; the preceding months were Thargelion and Skirophorion. At the time, the summer solstice always fell on the Julian date June 28th. The sequence of events thus went as follows:

Athenian Date	Astronomical Event	Julian Date
Thargelion 1	conjunction	
Skirophorion 1	conjunction	

	summer solstice	June 28th
Hecatombaion 1/New Year	conjunction	

The number of days between Skirophorion 1 and the solstice will vary in the way I have just described. The following chart gives the actual Julian dates of the last conjunction before solstice, Skirophorion 1, for the years 433 to 414 BCE.[72] By virtue of the simple fact that it seems to have worked, Meton's scheme must have generated dates that were identical to these or off by no more than a day in a handful of cases.

Difference between Last Conjunction and Summer Solstice, 433–414 BCE

Year	Conjunction (Skirophorion 1)	Days to Solstice (June 28)
433 BCE	June 26th	3
432	June 16th	13
431	June 5th	24
430	June 24th	5
429	June 12th	17
428	June 1st	28
427	**June 20th**	**9**
426	June 10th	19
425	June 28	1
424	June 17	12
423	June 7	22
422	June 26	3
421	June 14	15

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[72] Dates of conjunction take from http://astropixels.com/ephemeris/phasescat/phasescat.html, with a two–hour correction applied to convert from Universal Time to the time zone of Greece.

420	June 2	26
419	June 21	8
418	June 11	18
417	May 31	29
416	June 19	10
415	June 9	20
414	June 27	2
413	June 15	14

Damastes placed the eighth of the waning month of Thargelion seventeen days before the summer solstice in the year of Troy's sack. This meant that the summer solstice fell on the ninth of Skirophorion: eight days of Thargelion plus nine days of Skirophorion equals seventeen.[73] As one can see from the chart, this condition obtained in the year 427 BCE.

So why did Damastes think that in the year when Troy fell the summer solstice took place on the ninth of Skirophorion? Let us posit that Damastes, like Democritus and others, used the Spartan royal genealogies to date the sack to 1150 BCE, i.e. to the spring of 1149. This is exactly 38 cycles of 19 years earlier than the spring of 427: 1149 − (38 · 19) = 427. So what Damastes must have done to calculate the differential was to start from spring of 1149, count down 38 cycles of 19 years to 427, and then look up the differential in Meton's system. Alternatively he may have counted down 39 cycles of 19 years to 408; the result would still be the same.

Damastes' unreasonably exact dating for the fall of Troy was thus based on extrapolating the Metonic cycle backward to the Spartan epoch for Troy, and treating the solar–lunar configuration as identical to that of

[73] Also, when Damastes specified that the solstice took place 20 days before the end of the year, this implied that the month Skirophorion contained 9 + 20 = 29 days.

spring 427 BCE. Had he chosen a different year for his Trojan epoch, he would have come to a different conclusion about the configuration. In reality the moon was not in its third quarter on June 12th of 1149 – it was in fact about three days shy of that phase – but at the time Damastes' would have had no way of knowing about the subtle errors in Meton's system.

THE ATTIC-SICYONIAN EPOCH

While most scholars of the fifth and fourth centuries employed the Spartan epoch, an alternative dating for the fall of Troy to the year 1212 also found some advocates. Since these scholars were either associated with Athens or Sparta, I will refer to it as the Attic-Sicyonian Epoch.

The oldest and clearest evidence for the epoch is the following paraphrase of the Peripatetic philosopher Dicaearchus of Messene's thoughts on the antiquity of Egypt (Scholia to Apollonius of Rhodes' *Argonautica*, 4.276):

> Dicaearchus in book 1 [of his *Life of Greece*] says that Sesonchosis was king Horus with Isis and Osiris, and from Sesonchosis to the reign of Neilus there were 2500 years… and from the capture of Troy to the first Olympiad there were 436 years, 2943 years altogether.

Dicaearchus' Trojan epoch works out to 776 + 436 = 1212 BCE exclusive, or 1211 inclusive. Unfortunately no other evidence for Dicaearchus' chronological system survives that would allow us to comment further on this dating.[74]

We observed early that the historian Menaechmus of Sicyon recorded a king and priest list for legendary Sicyon which made its way into the

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[74] For more on Dicaearchus see Fortenbaugh and Schütrumpf 2017.

Chronography of Eusebius via Castor of Rhodes, and that his list was an expanded version of the register of early kings published at Sicyon.[75] The list in Eusebius contains several brief historical notices, including one which reports that Troy fell in the reign of king Polypheides, 1242 to 1212 BCE:[76]

The Sicyonian King List (via Castor/Eusebius)

King (K)

	or Priest (P)	Reign	Accession
Polypheides	K	31 years	1242 BCE
"During his reign Troy was captured."			
[Troy's fall			**1212**]
Pelasgus	K	20	1211
Zeuxippus	K	31	1191
Archelaus	P	1	1160
Automedon	P	1	1159
Theoclytus	P	4	1158
Euneus	P	6	1154
Theonomus	P	9	1148
Amphigyes	P	12	1139
Charidemus	P	1	1127

   "(Charidemus) could not bear the expense, and went into exile. He
   was priest 352 years before the first Olympiad."

Of the attested Trojan epochs, only the year 1212 fits this span, and does so rather neatly, coinciding with Polypheides' final year. The source for

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[75] Pages 32–34, above. Christesen 2007, 514–516, offers a brief overview of his work. Robertston 1978 is very good on the context in which Menaechumus was writing.

[76] Eusebius, *Chronography* 82.27–83.8 Karst.

this notice cannot have been Castor or Eusebius, who both subscribed to the Eratosthenian epoch. Nor was it likely to have been part of the original Sicyonian inscription, since the timeline for that document assumed the Spartan epoch. That leaves Menaechmus, and we may accordingly credit him with the adherence to the 1212 dating. Menaechmus, like Dicaearchus, was active in the second half of the fourth century. This epoch would thus appear to have originated around this time.

The next item we need to consider is the Parian Chronicle. This is one of the most valuable documents for the study of chronology since it is the only chronicle of events in the Hellenic world that dates before Eratosthenes. It too assumes the Attic-Sicyonian epoch for Troy, but with a date four years lower.[77] Entries for the outbreak and the end of the Trojan War read as follows (A.38, 39):

"Since the time when [the Gree]ks [brought] their army to Troy, 954 years, in the thirteenth year of [Men]estheus' reign at Athens."

"Since the time when Troy was captured, 945 years, in the <twenty> second year of [Mnesthe]us' reign at Athens, on the seventh day of the waning moon, in the month [Thargeli]on."

The dates for the two entries are spaced ten years apart in accordance with the tradition that Troy fell after a ten year long war. Since the base year from which the *Chronicle*'s dates are counted back is 264 BCE, this places the war's inception in 1217 and the sack in 1208. Now the *Chronicle* contains numerous errors on the order of a handful of years; Darius' accession, for instances, is listed three years too late, in 519 rather

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[77] Jacoby 1904 remains essential, particularly for its collection of comparanda; but see also Rotstein 2016 who provides a fuller appreciation of content and context.

than 522 (A.59), and the accession date for Alyattes, as we shall see in the next chapter, is four years too low. So it is economical to postulate a four-year error in the reckoning, similar to that which we find for Alyattes, that would result in a Trojan epoch, 1212, identical to what we encounter in other Athenocentric chronologies.

Let us now contemplate how the 1212 epoch may have been derived. Since Greek chronology was based on intervals, a productive way to proceed is to count the number of years from this date to other key historical events and consider whether any of the intervals might be numerically significant. Below are the key events in Eratosthenes' system and the resulting intervals from 1212 BCE:

	Date	Interval from 1212	
		inclusive	exclusive
The Spartan epoch	1150 BCE	63	62
Lycurgus' guardianship	885	228	227
Olympiad 1.1	776	437	436
Xerxes' crossing	481	732	731
Peloponnesian War	432	781	780
The defeat of Athens	405	808	807
The battle of Leuctra	371	842	841
The death of Philip	336	877	876
Alexander's crossing	335	878	877

None of these intervals seem all that significant at first glance. The only items of potential interest are the intervals from the Trojan epoch to Xerxes' crossing, 731 or 732 years. The number 730 is significant for astronomical reasons, as we saw earlier when we were looking at Democritus: it is the number of days and nights in a year of 365 days, and could be used as the basis for a Great Year cycle. But the actual solar

year is a bit longer than 365 days. In the first half of the fourth century, when Dicaearchus was active, the best estimate put it at 365 and a fraction days long.[78] This added fraction, when rounded up, brings the total number of days and nights to 731, and can be used to generate a 'Great Year' of 731 years. Hence, 731 years before Xerxes' crossing in 481 BCE comes to 1212.

It may seem implausible that scholars should have dated the fall of Troy by such means, but there is little difference in principle between this mode of reckoning and the idea that Troy fell exactly 1000 years before Alexander the Great crossed the Hellenspont, a position several respected historians held, as we shall see in the next section of this chapter. The hypothesis that the year of Troy's sack was calculated from a long interval of 731 years possessing astronomical significance also receives support from the dating for the sack that we encounter in the second of the entries from the Chronicle – the seventh day of the waning month in Thargelion. As we saw earlier, this was the date Damastes determined from the reported phase of the moon.[79] And as we also saw, Damastes calculated the interval between this date and the solstice by projecting the Metonic cycle back in time. Between Damastes' astronomical interests and Democritus' recognition of the significance of a 730-year interval reaching back to the fall of Troy, it is entirely credible that the Trojan epoch of 1212 was established by counting back 731 years from Xerxes' crossing.

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[78] A well-regulated Metonic cycle is based on the recognition of the equation 19 solar years = 235 lunar months = 6,940 days, from which it is a simple procedure (divide through by nineteen) to calculate that one year = 365 5/19th days; cf. Geminus, *Introduction to the Phenomena* 8.50–58. The Athenian prytany calendar in the late fifth century was 366 days long, which was likely a rounded version of 365 days plus some fraction.

[79] It is true that Damastes placed it eight days from the end of the month, not seven; but this is an artifact of the variability between 29- and 30-day months in a well-regulated system; the seventh day from the end of a 29-day month occupies the same position from the start of a sequence as the eighth day of a 30-day month.

The Attic-Sicyonian epoch also makes an appearance in a document of considerable importance for Athenian antiquities, the list of Attic kings and multi-year archons. This roster runs from Cecrops, the first monarch, to Alcmaeon, the last proper king, before listing the seven ten-year archons and ending with Creon, the first annual archon. Our main source for this list is Eusebius, who quotes it in his *Chronography* and identifies Castor of Rhodes as his source; he also incorporated it into the tables of his *Canons*.[80] The names and order of the rulers are the same in both texts, but the reigns show small but significant variations, as does the anchor point from which absolute dates are determined. For this portion of *Chronography* we are fortunate to have an excerpt preserved in the original Greek as well as the Armenian translation; the Greek text synchronizes the first Olympiad with the thirteenth year of Aeschylus, which it calls "the year after the twelfth"; the Armenian simply says "in the twelfth year," the word "after" seemingly having been lost in translation. By contrast, in the *Canons* as reproduced by Jerome, the first Olympiad is synchronized with Aeschylus' third year. Nevertheless, all these texts date the first annual archon to the same year, 683 BCE. Since the number of years between the first Olympiad and Creon was fixed, as was the length of Aeschylus' reign, something had to give. The compensating variation shows up in the number of years afforded to Alcmaeon, Aeschylus' successor: he is assigned a reign of 12 years in the *Chronography*, but only 2 years in the *Canons*.

year	*Chronography*/Castor	*Canons*
788 BCE	A. Aeschylus 1	

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[80] 87.9–88.28 Karst. Scholarly interest in these lists more or less dried up once it became clear that they were relatively late compilations with little or no connection to the authentic history of 'Dark Age' Athens. Jacoby 1902 is the last major study of the list; he overlooks that the reigns in the *Chronography* are superior to those given in the *Canons*, which throws some of its reconstructions into doubt.

778		A. Aeschylus 1
776	**B. Aeschylus 13**	**B. Aeschylus 3**
766	C. Aeschylus 23	
765	D. Alcmaeon 1	
756		C. Aeschylus 23
755		D. Alcmaeon 1
754	**E. Alcmaeon 12**	**E. Alcmaeon 2**
753 to 684	F. decennial archons	F. decennial archons
683	**G. Creon**	**G. Creon**

The cause for this discrepancy is easy to explain. Eusebius composed the *Chronography* before the *Canons*, as a kind of preliminary study; hence its king list is the more faithful reproduction of Castor's original. Now a notice in Castor's list explicitly places the capture of Troy in the reign of Menestheus; and the reigns given by Castor, when combined with the synchronism of Olympiad 1.1 with Aeschylus 13, cause Menestheus' time on the throne to fall between the years 1213 and 1191 BCE. Such a range for the capture of Troy is impossible to square with the Eratosthenian epoch of 1184. By changing the synchronism between Aeschylus and the first Olympiad as he did in the *Canons*, Eusebius moved all the events that came before Aeschylus down by nine years, including the last year of Menestheus, which landed in 1182. The year 1182 happens to be Eusebius' Trojan epoch – the result of an error in reproducing Eratosthenes' system whose origins are obscure. In short, Eusebius adjusted the absolute dates for the Attic kings and shortened

Alcmaeon's reign in order to have Menestheus' final year overlap with his date for the fall of Troy.[81]

As for Castor's list, the fact that it was not consistent with Eratosthenes' epoch was not due to negligence – if anything, we should credit him with scrupulous scholarship. In the case of the Sicyonian kings he faithfully copied out a king list along with its notices despite the fact that its Trojan epoch conflicted with Eratosthenes'. He apparently did the same thing here while reproducing the king list of an unknown Atthidographer. In this list the capture of Troy fell somewhere between 1213 and 1191 BCE; since the Attic-Sicyonian epoch is the only candidate that falls within this time period, our authority apparently dated the capture of Troy to Menestheus' second year. This might seem like a mistake, since the Homeric catalogue of ships suggests that Menestheus was present at Troy from the very beginning of the war. However, the entry for the Trojan epoch on the Parian Chronicle also places it in Menestheus' *second year*. This figure is generally seen as an error and emended to Menestheus' twenty-second year in order to harmonize it with the previous entry, which puts the start of the Trojan war in Menestheus 13. It is possible, however, that the error resulted from the combining of data from two different sources – Phaenias, let's say, who put the sack in Menestheus 22 (treated as 1129 BCE), and an unknown Atthidographer who linked it to Menestheus 2 (treated as 1212).

Whether this conjecture is accurate or not, we can reconstruct the list which Castor drew on as follows:

The Attic king/archon list (anonymous Atthidographer/Castor)

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[81] I suspect that Eusebius also added one year to the reign of Phorbas, who is granted 31 years in the *Canons*, but rules for 30 years according to the Armenian version of the *Chronography* and Syncellus. The 30 year reign is reflected in the table.

King	Reign	Accession
Menestheus	23	1213 BCE
[Capture of Troy		1212]
Demophon	33	1190
Oxyntes	12	1157
Apheidas	1	1145
Thymoetes	8	1144
Melanthus	37	1136
Codrus	21	1099
Medon	20	1078
Acastus	36	1058
Archippus	19	1022
Thersippus	41	1003
Phorbas	30	962
Megacles	30	932
Diognetus	28	902
Pherecles	19	874
Ariphron	20	855
Thespieus	27	835
Agamestor	20	808
Aeschylus	23	788
Olympiad 1.1	13	776
Alcmaeon	12	765
Charops	10	753
Aesimides	10	743
Cleidicus	10	733
Hippomenes	10	723
Leocrates	10	713
Apsander	10	703

Eryxias	10	693
Creon	1	683

Its author cannot be identified with any certainty, but we may be fairly confident that it was drawn up in the second half of the fourth century or the first half of the third.

THE ALEXANDER EPOCH

When Alexander the Great marched his soldiers across the Hellenspont with his sights set on the Persian Empire, no one could have foreseen what the consequences of this adventure would be. Eleven years later, just before he passed away, Alexander was the most powerful man in the Greek world and ruler of the old Persian Empire. While the political entity he led did not survive for long in one piece, his conquest set in motion the Hellenization of the Near East, the Egyptian renaissance under the Ptolemies, and the spread of *koine* Greek, to name just a few trends. It was, in short, the beginning of a new age, the Hellenistic era, and by any way of looking at it a genuinely epochal event.

Around time of the king's death Duris of Samos composed a history of Hellas in which he asserted that Troy fell 1,000 years before Alexander marched his troops into Asia. This interval was obviously not the product of research into the material remains of Bronze Age Greece or overlooked genealogical archives; rather, it was inspired by millenarianism, the notion that epochal historical events are separated from each other by neat intervals such as one thousand years. Similar speculation gave rise to the Attic–Sicyonian epoch, but in this case ideological considerations took the place of astronomical numerology.[82]

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[82] For an overview of Duris's work, see Kebric 1977.

A small uncertainty attaches to the precise date of Duris' Trojan epoch. Our only source for it is the passage from Clement that we looked at earlier (*Stromata* 1.21.139):

"There are 1828 years from Cecrops to Alexander of Macedon, 1250 years from Demophon, and from the capture of Troy to the Return of the Heraclids 120 or 180 years. From this to the archonship of Euaenetus, in whose time they say Alexander crossed into Asia, there are 715 years according to Phaenias, 735 years according to Ephorus, 820 years according to Timaeus and Cleitarchus, 774[?] years according to Eratosthenes, and from the capture of Troy to Alexander's crossing into Asia, **1000 years according to Duris**; and from here to Euanetus' archonship at Athens, when Alexander dies, 11 years."

Are the intervals cited in this text inclusive or exclusive? The eleven-year interval between Alexander's crossing (335 BCE) and his death (324) was counted exclusively, as was the interval given for Ephorus. Because the interval for Eratosthenes has been transmitted incorrectly – 774 years is too high – it is hard to say how it was determined; but if the intended figure was 770 years, the count was inclusive. The interval for Phaenias appears to be inclusive. Since we possess no other meaningful evidence for Duris' chronological system, we must suspend judgment and content ourselves with calling his Trojan epoch either 1334 or 1335.

Somewhat more evidence survives for the chronology of the historian Timaeus of Tauromenium, another millenarian.[83] His Trojan epoch can be reconstructed from two clues. First, he dated the foundation of Corcyra 600 years after the fall of Troy (Scholia to Apollonius of

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[83] Baron 2013 offers a good introduction to Timaeus. The most important work on his chronology is Asheri 1992; see also Feeney 2007, 18/9, 92–97.

Rhodes *Argonautica*, 4.1216). Eusebius reports that the foundation date
of Corcyra was 706 BCE, which would yield an epoch in 1305 or 1306;
but this is not the only dating we have. Antiochus of Syracuse
synchronized Corcyra's settlement with Syracuse's (Strabo, *Geography*
6.2.4), and one date for Syracuse's was 735;[84] counting back 600 years
from this puts Troy's sack in 1334 or 1335, one-thousand years before
Alexander crossed the Hellespont.

According to the passage from Clement quoted above, Timaeus put
the Heraclids' Return 820 years before Alexander's invasion, which is
the year 1155 exclusive. Since Troy's fall was normally dated 80 before
the Return, one would expect Timaeus' Trojan epoch to be 1235. The
only way Timaeus' date for the Return can be harmonized with a
Trojan epoch of 1335 is to assume that the interval between the two is
180 years. As it happens, Clement says in the same passage that this
interval was sometimes specified as 180 years; since Timaeus is one of
the authorities Clement cites, it is quite likely he was Clement's
unnamed source. This would indicate that in addition to dating Troy's
fall to 1335, Timaeus also extended the time required for the Heraclids
to infiltrate the Peloponnese to 180 years.

A third bit of evidence for Timaeus' chronological system also
deserves scrutiny. According to Censorinus, Timaeus counted 417 years
from Troy's sack to the first Olympic games (21.3). The resulting Trojan
epoch, 1193 or 1192 BCE, does not match the one derived above; it is
143 or 142 years too low. However, Eratosthenes placed the Ionian
migration 140 years after Troy's fall, following a source he apparently
considered authoritative. I would conjecture that Censorinus' interval
contains a misprint in its Roman numbers (e.g. CCCCXX for
CCCCXVII), and that somewhere along the way the Ionian migration

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[84] See discussion in chapter ten.

was mislabeled the date for Troy. Putting this all together we get the following key dates for Timaeus' chronological system:

Troy	1335 BCE	1,000 years before Alexander
The Ionian migration	1195	860 years
The Heraclid Return	1155	820 years
Corcyra's colonization	735	400 years
Alexander's Crossing	335	

Timaeus was a diligent student of chronology who synchronized the Spartan, Argive, and Athenian king lists, along with Hippias' table of Olympiads (Polybius, *Histories* 12.11.1). Timaeus' unusually high dating for Troy would have stretched the timeline of the Spartan kings considerably, adding about a century to the period of the Return, and putting the beginning of the two royal lines 84 years higher. This stretching would have required a substantial rewriting of early Spartan history, or at very least longer regnal spans. We have no indications as to how Timaeus managed this, but the need may have motivated his assertion that there were two Spartans named Lycurgus:

"Timaeus suspected that, because there were two Lycurguses in Sparta at different times, the deeds of both men were attributed to one member of the pair because of his fame, and that the older Lycurgus was not far from the time of Homer." (Plutarch, *Lycurgus* 1.2)

Aristotle associated Lycurgus with the first Olympic games, and this would presumably be the younger man by that name; the older Lycurgus would then be the lawgiver, who was synchronized by

Ephorus with Homer.[85] Perhaps Timaeus filled this century-long space with historical events that did not fit anywhere else.

Rounding out our trio of Alexander-epoch advocates is the historian Cleitarchus, who is cited by Clement along with Timaeus as an authority for placing the Return of the Heraclids 820 years before the Macedonian's invasion; presumably Cleitarchus was another millenarian who dated Troy's fall to 1335 BCE. We have no context for his dating, except that he wrote at about the same time as Timaeus and Duris. His account of Alexander's deeds was one of the earliest and most colorful to be composed, and influenced later tellings of the general's life for centuries to come.[86]

ERATOSTHENES' EPOCH

No ancient scholar did more to shape the foundations of Greek historical chronology than Eratosthenes of Cyrene.[87] His only potential peer, Apollodorus of Athens, compiled a chronologically scrupulous narrative of Greek history from the sack of Troy to his own day which canonized numerous dates; yet the framework in which Apollodorus worked was by-and-large identical to that which had previously been constructed by Eratosthenes. Few fragments of his *Chronographia* are preserved, but its influence can be traced everywhere in historians from the first century BCE onward; contemporary scholars continue to pay homage to Eratosthenes every time they cite 1184 BCE as the year of Troy's fall.[88] The fame of this dating makes the question of how it was

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[85] Aristotle: Plutarch, *Lycurgus* 1.1. Ephorus' dating for Homer is discussed in chapter twenty two.

[86] Prandi 1996.

[87] See Geus 2002, 309–332, and Möller 2005.

[88] See Jacoby 1923–1958, no. 241. A modern edition of all the fragments of Eratosthenes remains a strong desideratum.

established particularly salient. As the preceeding discussion has made clear, it was innovative, with no precedent in prior chronography; yet no text that survives explains Eratosthenes' reasoning. Thus we must fall back on our knowledge of how the other epochs were determined and apply it to Eratosthenes' system.

We are fortunate to possess a précis of this system in what Clement claims is Eratosthenes' original language (*Stromata* 1.21.138; formatted for clarity):

> From the sack of Troy to the return of the Heraclids was 80 years,
> from then to the settlement of Ionia, 60 years;
> the period that follows to Lycurgus' guardianship, 159 years;
> until the year before the First Olympiad, 108 years;
> from this Olympiad to Xerxes' crossing, 297 years;
> from this to the start of the Peloponnesian War, 48 years,
> and to the dissolution and defeat of the Athenians, 27 years,
> and to the battle of Leuctra, 34 years;
> after this, to the death of Philip, 35 years,
> and after this, to Alexander's demise, 12 years.

Two of these events can be given dates by objective means: the death of Alexander the Great (the day and month are recorded in contemporary Babylonian archives) and the start of the Peloponnesian War (placed by Thucydides in the spring before a solar eclipse which can be dated astronomically to August 3, 431 BCE).[89] If we use these to calibrate the rest of the sequence, we arrive at dates that match the vulgate of Greco–Roman historical chronology. We can also infer from the events whose seasons are known that Eratosthenes must have been using a year that

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[89] On Alexander's date see Depuydt 1997.

began sometime between late June and and early July, i.e. he was employing the Athenian civil year.

Sack of Troy	1184/3 BCE	
80 years to Heraclids' return	1104/3	
60 years to Ionian settlement	1044/3	
159 years to Lycurgus' guardianship	885/4	
108 years to the year before Ol. 1.1	777/6	
297 years to Xerxes' crossing	480/79	early summer 480[90]
48 years to the Peloponnesian War	432/1	spring 431[91]
27 years to the defeat of Athens	405/4	spring 404[92]
34 years to the battle of Leuctra	371/70	July 371[93]
35 years to the death of Philip	336/5	summer 336[94]
12 years to the death of Alexander	324/23	June 11, 323[95]

There can be no question that Eratosthenes' date for the fall of Troy was 1184, although if he placed the event in the spring like most scholars did, it would fall, strictly speaking, in our Julian year 1183. Why then did he reject the Alexander epoch (1335), the Attic epoch (1212), the Spartan epoch (1150), and Sosibius' modified Spartan epoch (1170) in favor of something different?

One of the most intriguing explanations previously put forward is Dmitri Panchenko's claim that Eratosthenes misinterpreted information

[90] The battle of Thermopylae took place in the late summer or early fall of 480, when Calliades was archon at Athens; the date is guaranteed by Calliades' place in the archon list, and by its occurring shortly after the Olympic games (7.206, 8.26, 72).

[91] Thucydides describes a solar eclipse that took place in the first summer of the war (2.28.1) which can only be that of August 3, 431 BCE; the war began in the previous spring (2.2.1).

[92] Thucydides, *History* 2.2.1, 5.26.1.

[93] Pausanias, *Tour* 8.27.6, Plutarch *Camillus* 19.

[94] Arrian, *Expedition* 1.1.

[95] Plutarch, *Alexander* 76, Arrian, *Expedition* 7.28, Depuydt 1997.

in the passage from Democritus' *Short Cosmology* relating to the fall of Troy.[96] Democritus published his *Short Cosmology* in 421 BCE, when Aristion was archon at Athens. Aristion's name is almost identical to that of the archon for 454, a certain Ariston. If we suppose that Democritus indicated the year of his treatise's publication by naming the archon, and that Eratosthenes' text of it read Ariston instead of Aristion, he might have concluded that Democritus placed the sack of Troy 730 years before 454, rather than 421; the resulting date is 1183, just one year after Eratosthenes' epoch.

As clever as Panchenko's suggestion is, it cannot, I think, be right. For one, it is hard to see why Apollodorus, a perceptive and careful chronologer who was intimately familiar with the Athenian archon list, would have subscribed to it. Eratosthenes either explained the reasons behind his choice of Trojan epoch in his treatise or he did not. If he did, Apollodorus could have easily detected the mistake and corrected it. If he did not, it would come across as nothing more than a 'wild' dating for Troy, with nothing to recommend it in the face of more established alternatives. Of course, Apollodorus may have overlooked the error or blindly followed Eratosthenes' lead – but in a matter as important as this, such an oversight or deference to authority is scarcely credible. Panchenko's hypothesis has an additional shortcoming, its failure to yield a perfect numerical solution: according to the most natural reconstruction of the data, Democritus dated Troy's fall to 1150, the Spartan epoch; yet the Eratosthenian epoch is 34 years earlier than this, not 33.

While Panchenko's proposed explanation falls short, it nevertheless sets a high bar which any alternative must beat. A proposed reconstruction of Eratosthenes' reasoning needs to pass at least two tests:

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[96] Panchenko 2000, who credits Alexander Verlinsky with recognition of the homonymous archons.

it should be formulated in such a way that would have seemed persuasive to a scholar like Apollodorus, and it ought to be able to account precisely for the 34-year difference.

Let us make a fresh start by asking how the other early dates in Eratosthenes' system were determined, then considering whether his Trojan epoch might be dependent on one of them. The first event after the fall of Troy whose interval is given is the Return of the Heraclids. Eratosthenes uses the 80-year span that is found in most historians from Thucydides onward, and the resulting date for the Return, 1104 BCE, is obviously dependent on the Trojan Epoch rather than vice versa. Eratosthenes' next interval puts the colonization of Ionia 140 years after the Trojan Epoch. The time span from Troy to the colonization is variously reported. The Parian Chronicle makes it appoximately 120 years, while Philochorus reckoned it at 180 years and associated it with king Archippus; the Attic king list has a notice that links Acastus' reign to the colonization.[97] Despite this variation, all of the sources are Athenocentric. It seems likely then that Eratosthenes was drawing on some unknown Atthidographer for his interval – as did Timaeus, if I am right in ascribing a 140-year interval to his system. It is important to note that Eratosthenes did not take his absolute date for the colonization of Ionia from the Atthidographer in question, only his interval. Hence, Eratosthenes' dating of the event is dependent on his Trojan Epoch.

Eratosthenes' date for the first Olympiad was derived from Hippias' list of Olympic victors and the well-known quadrennial cycle for the games. For some reason Eratosthenes chose for his temporal landmark 777 BCE, the year prior to Olympiad 1.1, instead of 776. The interval between this date and the Trojan epoch is 408 years, which is what we might call an 'uninteresting' number, since it is not, say, the product of

[97] Parian Chronicle A.42–44; Syncellus, *Chronography* 340; Eusebius, *Chronography* 87.28 Karst.

generational reckoning; this indicates that the epoch and the Olympic year were established independently of one another. Eratosthenes' date for Xerxes' crossing is based ultimately on the Athenian archon list and Herodotus' comment that Calliades was archon at the time (8.51.1). It is separated from the Trojan epoch by 705 years, another number with no interesting qualities. It is noteworthy that Eratosthenes, unlike several of his predecessors, did not establish his Trojan epoch by counting back a special long interval from Xerxes' crossing; he must have used some other means to fix it.[98]

If our goal is to understand how Eratosthenes calculated his Trojan epoch, there is only one date in his system that is potentially of interest to us: his date for Lycurgus' guardianship, 885 BCE. The interval between this date and the fall of Troy is 80 + 60 + 159 = 299 years – an interesting figure, since it is just one shy of the total number of years in nine generations. Given that the two dates are correlated, the next question is whether the Trojan epoch was used to date Lycurgus' guardianship or whether Lycurgus was used to date Troy. I will now

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[98] The choice of year 480 instead of 481 is best explained in terms of an uncertainty about the calendar year of Xerxes' crossing of the Hellespont. The battles of Artemisium and Thermopylae took place in the late summer or early fall of 480/79, when Calliades was archon at Athens. Herodotus bridges the time from Xerxes' crossing to the battles thus – I have translated rather literally to preserve the ambiguity of the original: "After the crossing of the Hellespont, the site from which the barbarians began their march, once they spent a month there crossing over into Europe, they reached Attica within three months, when Calliades was archon at Athens" (8.51.1). Question: does the civil year when Calliades was archon include the month when the crossing was made, or not? The final genitive absolute which gives the dating indication could be taken to modify all of the activities described in the sentence – crossing, march, and arrival in Attica – or just the last. Taken in the first sense it would put Xerxes' crossing in the year 480/79; taken in the second, it would imply that it happened in the previous Athenian year, 481/0. Eratothenes took it in the former sense, since he dated Troy's fall 670 years earlier to 1149; Democritus and others who treated 1150 as the Spartan epoch evidently took it in the latter sense

show that the latter is the case, by identifying the source for Lycurgus'
date and the rationale for the 299 year interval.

Plutarch tells us how Eratosthenes calculated the date for Lycurgus
(*Lycurgus* 1.2):

"Those who tally up the time period [when Lycurgus was alive] using
the successions of those who held the office of king at Sparta, like
Eratosthenes and Apollodorus do, declare that [Lycurgus] was quite a
few years prior to the first Olympiad."

Eratosthenes apparently used a list of Spartan kings to pinpoint Lycurgus'
year. The term 'successions' (*diadokhai*) suggests a list of officeholders,
rather than lineal ancestors, and if it was used to reckon with, the list
must have included regnal spans as well. Now according to the narrative
which Plutarch says was canonical in his day, Lycurgus' guardianship
began when he transfered the title of king from himself to his nephew,
the infant king Charilaus. The Spartan king lists preserved by
Diodorus/Eusebius place 'Charicles' accession in 883, which is close to
885 though obviously not identical to it. The list in which it appears is
obviously corrupt, since the names of three Eurypontid kings are
missing; so it is possible that the numbers have been corrupted as well.
Whatever the reason for the two-year discrepancy, the key point is that
Eratosthenes must have based his date for Lycurgus on *some* king list –
that is the plain implication of Plutarch's statement – and the only
plausible candidates are Ephorus and Sosibius.

Nevertheless, Eratosthenes seems to have rejected Ephorus' and
Sosibius' Trojan epochs, preferring to make the interval between Troy
and year 1 of Lycurgus/Charicles a total of 299 years. This long interval
is odd, not only because of the missing year, but because it does not
seem to reflect any of the recorded genealogies for Lycurgus. Had

Eratosthenes followed Herodotus' text he would have placed Lycurgus in the seventh generation after Troy's fall, counting inclusive:[99]

1. Hyllus   Generation of the Trojan War
2. Cleodaeus
3. Aristomachus
4. Aristodemus
5. Eurysthenes
6. Agis
7. Echestratus   **Lycurgus**
8. Leobates

Alternatively, if he had used any of the other systems for which we have evidence, he would have placed Lycurgus in the *tenth* generation after Troy, again counting inclusively. This is where he falls in the Spartan succession recorded by Ephorus (Strabo, *Geography* 10.4.18), in the personal genealogy which Plutarch says "most people follow" (*Lycurgus* 1.4), and in the king list given by Pausanias, which links Lycurgus to the generation of Agesilaus (3.2.4):

Ephorus/Strabo, Pausanias	Plutarch (cf. Pausanias 3.7.1–3)
1. Hyllus	Hyllus
2. Cleodaeus	Cleodaeus
3. Aristomachus	Aristomachus
4. Aristodemus	Aristodemus
5. Eurysthenes	Procles
6. Agis	Sous

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[99] This is the production of the list at 7.204, combined with the indication at 1.65.4 that Lycurgus was the regent for Leobates.

7. Echestratus	Eurypon
8. Labotes	Prytanis
9. Dorysthus	Eunomus
10. Agesilaus/**Lycurgus**	**Lycurgus**

The post–Herodotean consensus held that Lycurgus belonged to the tenth generation after the fall of Troy. So we are faced with not one but two puzzles: why nine instead of ten generations in Eratosthenes' system? And why 299 years instead of 300?

I would argue that these two mysteries are related, and that the solution to the conundrum lies not in historical sources but in the pragmatics of counting and measuring intervals. Inclusive counting is a very natural–seeming procedure: so, if one wants to measure the distance between two Spartan patriarchs, one simply counts all the names in the relevant genealogy, starting with the first king in question, and ending with the second. It is this sort of counting that leads Herodotus to describe the rape of Helen as happening in the "second generation after" the rape of Medea (1.3.1), despite the fact that they are only one generation apart from each other: Medea is generation one, Helen is generation two. Once this count is made, it can then be converted into years using the 40-70-100 rule. It was this procedure – counting back from 481 BCE the 670 years that made up the twenty generations from Leonidas to Hyllus – that gave rise to the Spartan epoch. However, as simple as it may seem, this system generates an error when used to measure intervals. Suppose someone were to ask how many years separated Helen from Medea. To obtain the answer one would count the generations – two – and convert to years – 70; but of course the answer should be 33 1/3, rounded to 40. Discrepancies like this tend to escape notice when the counts are larger, but become obvious when the numbers are very small. To avoid this sort of problem, the

mathematically correct thing to do when measuring temporal intervals is to count *exclusively*. Thus, there is only one generation separating Helen from Medea, approximately 40 years.

Historians who worked with astronomical cycles like Meton's would have learned the importance of counting exclusively when applying intervals.[100] But inclusive counting remained common, and no one seems to have noticed that the Spartan epoch had been determined incorrectly. I would argue that as an astronomer and mathematician of the first rank, Eratosthenes would have been cognizant of this issue and counted generations in an exclusive fashion before converting them to year spans. Ten generations of Lacedaemonian patriarchs *inclusive* will represent nine generations *exclusive*; hence the proper interval from the destruction of Troy to Lycurgus is 300 years. When added to the year 885, this yields the date 1184. Eratosthenes measures out 299 years from Troy to Lycurgus because strictly speaking the epoch is the last year of the preceding interval and should not be part of the count:

………………..1184 BCE	Troy's sack
…………….……1104	80 years to Return
……………1044	60 years to Ionia
………………………………..……..885	159 years to Lycurgus
	= 299 years total

In short, Eratosthenes did two things differently when he came up with his Trojan epoch. First, he used the guardianship of Lycurgus as his starting point, not Xerxes' crossing – evidently he felt that the date of

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[100] Meton's cycle is always described as being nineteen years long (Aratus, *Phaenomena* 753, Geminus, *Introduction to the Phaenomena* 8.48, Diodorus Siculus, *Library of History* 12.36.1), despite the fact that traditional inclusive counting would identify it as a 20-year period; compare the standard description of the Olympic quadrennium as a five-year period (πενταετήρις).

the former event was securely founded. Secondly, he introduced a mathematically-necessary correction into the way generational counts were converted to years. He did not discover any new facts about the date of Troy's sack that were not already available to prior scholars; instead, he handled known facts in a more rigorous manner. The result was the date 1184 which is still widely cited today.

CRATES AND THRASYLLUS

After Eratosthenes, two more scholars proposed different epochs for the fall of Troy. Crates of Mallos, the second-century literary critic best known for his controversial interpretations of Homer's poetry, also took a radical position on Homer's chronology, arguing that the epics must have been composed no more than 80 years after the Trojan War, and perhaps as few as 60, on the grounds that Homer was personally acquainted with some of the men who fought there.[101] Crates also had a novel take on the date of Troy's sack. Censorinus (21.3), in his statement on the Trojan epochs, added to Sosibius, Eratosthenes, and Timaeus a certain 'Aretes'. Censorinus' editor Jahn recognized that behind the otherwise unknown 'Aretes' lay the name Crates, misprinted by Censorinus, his copyists, or his sources.[102] His Trojan epoch fell either 514 or 604 years before the first Olympics – the manuscripts are split between *DXIIII* or *DCIIII*, the two intervals placing the fall either in 1290 or 1380 BCE. The reading *DCIIII* seems preferable since this would yield a dating with a simple rationale: 1380 is exactly 900 years before the battle of Thermopylae, or 27 generations. The number 27 is neat from a numerological point of view, being equal to 3^3, just as the

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[101] *Life of Homer* 2.3.21, 5.10–14, 6.37, Allen. For a recent edition of Crates' fragments, see Broggiato 2001.
[102] Jahn 1965, *ad loc.*

1,000 year interval in the Alexander epoch is equal to 10^3. Crates' date for Homer can also be deduced: $604 - 80 = 524$ years before 776, or 1300. Despite or because of its radical character, neither dating seems to have found any adherents.[103]

   To the best of my knowledge the last ancient scholar to propose an Trojan epoch that differed materially from previous ones was Thrasyllus, the Platonist polymath who counseled the emperor Tiberius and came up with the tetralogical groupings of the dialogues of Plato.[104] Clement quotes his chronological system, which is notable for its mixing of Greek and Roman key dates (1.21.137.3/4):

"Then 4 years to Alexander's kidnapping of Helen, then 20 years to the capture of Troy. From the capture of Troy to the return of Aeneas and the foundation of Lavinium 10 years, to the rule of Ascanius 8 years, and to the return of the Heraclids 61 years, and to the Olympiad of Iphitus 338 years."

In tabular form this works out as:

Event	Interval from Previous	Date
Kidnapping of Helen	4 years	1213 BCE
Sack of Troy	20	1193
Foundation of Lavinium	10	1183
Accession of Ascanius	8	1175
Return of the Heraclids	61	1114

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[103] Möller 2005, 249, credits Varro with a Trojan epoch of 1176 BCE. This is based on Censorinus, *The Day of Birth* 21.2, whose contents seem to be taken directly from Varro. However, what Censorinus says is: "from this [sc. the fall of Troy] to the first Olympiad is a little more than 400 years." The phrase "a little more than" shows that Varro is simply thinking of Eratosthenes' interval from the first Olympiad to the fall of Troy, which is 409 years, inclusive.
[104] The fragments of Thrasyllus are conveniently available in Tarrant 1993.

First Olympiad	338	776

It is hard to tell what the reasoning behind this system was. The kidnapping of Helen is one year earlier than the Attic-Sicyonian epoch, but it is not clear what the connection is, unless the reference is to the kidnapping of Helen by Theseus, dated, perhaps, to the last year of Theseus' reign. The interval from Ascanius' accession to the first Olympiad equals 399 years, a total which recalls Eratosthenes 299-year interval, and seem to be based on an exclusive count of 12 generations. However, there is no king list or genealogy that would join Ascanius' family to the Olympic games. Thrasyllus' Trojan epoch is nine years higher than Eratosthenes', a change whose rationale is also obscure. As was the case with Crates, no scholar seems to have followed this idiosyncratic system or its Trojan epoch.

SUMMARY

Despite the sprawling nature of this chapter, its conclusions can be stated quite succinctly. Four different Trojan epochs achieved some measure of popularity in antiquity: the Spartan (1150/1170), the Attic-Sicyonian (1212), the Alexander (1335), and Eratosthenes' (1184 BCE). Each was the fruit of a different set of data and/or methodological assumptions. The Spartan epoch was the most widely used until Eratosthenes came along and set the chronology of Greek prehistory on new foundations. All were good-faith estimates made by scholars who believed that the sack of Troy was a world-historical event whose date could be rationally ascertained. None of them bore anything more than an accidental relationship to the date of the destruction of Wilusa near the end of the Bronze Age. Each one functioned as the anchor for a different system of dating the events of archaic and legendary Greek history, and this

multiplicity of epochs introduced occasional errors into the received dates for significant events.

Bibliography

Allen, Thomas W., and Arthur A. Rambaut. 1915. "The Date of Hesiod." *The Journal of Hellenic Studies* 35: 85–99.

Amyx, Darrell A. 1988. *Corinthian Vase-Painting of the Archaic Period*. University of California Press.

Asheri, David. 1992. "The Art of Synchronization in Greek Historiography: The Case of Timaeus of Tauromenium." *Scripta Classica Israelica* 11: 52–89.

Ballabriga, Alain. 1990. "La question Homérique pour une réouverture du débat." *Revue des Études Grecques* 103: 16–29.

Barber, Godfrey Lewis. 1935. *The Historian Ephorus*. Cambridge University Press.

Baron, Christopher A. 2013. *Timaeus of Tauromenium and Hellenistic Historiography*. Cambridge University Press.

Beloch, Karl J. 1913. *Griechische Geschichte* 2.2. Karl J. Trübner.

Bernhardy, Gottfried. 1822. *Eratosthenica*. Reimer.

Bietak, Manfred, and Ernst Czerny, editors. 2000. *The Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium BC*. Österreichische Akademie der Wissenschaften.

Boardman, John. 1999. *The Greeks Overseas*. Thames and Hudson.

Cartledge, Paul. 2002. *Sparta and Lakonia. A Regional History 1300–362 BC*. Routledge.

Den Boer, Willem. 1954. *Laconian Studies*. North-Hollar Publishing Company.

Boncquet, Jan. 1990. "Ctesias' Assyrian King-List and his Chronology of Mestopotamian History." *Ancient Society*. 21: 5–16.

Bowen, Alan C., and Bernard R. Goldstein. 1988. "Meton of Athens and Astronomy in the Late Fifth Century B.C." In: *A Scientific Humanist: Studies in Memory of Abraham Sachs*, Erle Leichty, Maria

deJ. Ellis, Pamela Gerardi, editors. University of Pennsylvania. 39–81.

Braund, David. 1994. *Georgia in Antiquity. A History of Colchis and Transcaucasian Iberia, 550 BC–AD 562*. Oxford University Press.

Broggiato, Maria. *Mallotes Crates. I frammenti*. Agorà Edizioni.

Browne, Henry. 1905. *Handbook of Homeric Study*. Longmans, Green, and Co.

Burgess, Jonathan S. 2001. *The Tradition of the Trojan War in Homer and the Epic Cycle.* The Johns Hopkins University Press.

Burgess, Richard W. 2002. "Jerome Explained: An Introduction to his Chronicle and a Guide to its Use." *The Ancient History Bulletin* 16: 1–32.

Burkert, Walter. 1976. "Das hunderttorige Theben und die Datierung der *Ilias*." *Weiner Studien* 89: 5–21.

----- 1995. "Lydia between East and West, or How to Date the Trojan War: a Study in Herodotus." In: Jane B. Carter and Sarah P. Morris, editors. *The Ages of Homer. A Tribute to Emily Townsend Vermeule*. University of Texas Press. 139–148.

Burn, Andrew R. 1935. "Dates in Early Greek History." *Journal of Hellenic Studies* 55: 130–146.

Carpenter, Rhys. 1933. "The Antiquity of the Greek Alphabet." *American Journal of Archaeology*. 37: 8–29.

----- 1938. "The Greek Alphabet Again." *American Journal of Archaeology*. 42: 58–69.

----- 1946. *Folk Tale, Fiction, and Saga in the Homeric Epics*. University of California Press.

Chrimes, Kathleen M. T. 1949. *Ancient Sparta. A Re-Examination of the Evidence.* Greenwood Press.

Christesen, Paul. 2007. *Olympic Victory Lists and Ancient Greek History*. Cambridge University Press.

Clinton, Henry Fynes. 1851. *Fasti Hellenici. An Epitome of the Civil*

and Literary Chronology of Greece from the Earliest Accounts to the Death of Augustus. Oxford at the University Press.

Cook, Erwin F. 1995. The Odyssey in Athens. Myths of Cultural Origins. Cornell University Press.

Crielaard, Jan P. 1995. "Homer, History and Archaeology." In: Jan P. Crielaard, editor. Homeric Questions: Essays in Philology, Ancient History and Archaeology. J. C. Gieben. 200–288.

Depuydt, Leo. 1997. "The Time of Death of Alexander the Great: 11 June 323 B.C. (–322), ca. 4:00–5:00 PM." Die Welt des Orients 28: 117–135.

Dickie, Matthew W. 1995. "The Geography of Homer's World." In: Øivind Andersen and Matthew W. Dickie, editors. Homer's World. P. Astrom. 29–56.

Dillery, John. 2015. Clio's Other Sons. Berossus and Manetho. University of Michigan Press.

Dunbabin, Thomas J. 1948. The Western Greeks. The History of Sicily and South Italy from the Foundation of the Greek Colonies to 480 B.C. Clarendon Press.

Easterling, P. E., and Bernard M. W. Knox. 2008. The Cambridge History of Classical Literature, I. Greek Literature. Cambridge University Press.

Edwards, Glynn P. 1971. The Language of Hesiod in its Traditional Context. Basil Blackwell.

Evans, James C. 1998. The History and Practice of Ancient Astronomy. Oxford University Press.

Evelyn-White, Hugh G. 1914. Hesiod, The Homeric Hymns and Homerica. The Macmillan Co.

Fehling, Detlev. 1985. Die Sieben Weisen und die frühgriechische Chronologie. P. Lang.

Feeney, Denis. 2007. Caesar's Calendar. Ancient Time and the

Beginnings of History. University of California Press.

Finley, Moses I. 1979. *The World of Odysseus.* Pelican Books.

Finkelberg, Margalit. 2000. "The *Cypria*, the *Iliad*, and the Problem of Multiformity in Oral and Written Tradition." *Classical Philology* 95: 1–11.

Fortenbaugh, William W., and Echart Schütrumpf, editors. 2017. *Dicaearchus of Messana. Text, Translation, and Discussion.* Routlege.

Fowler, Robert L. 1996. "Herodotos and his Contemporaries." *The Journal of Hellenic Studies* 116: 62–87.

----- 1998. "Genealogical Thinking, Hesiod's *Catalogue*, and the Creation of the Hellenes." *Proceedings of the Cambridge Philological Society* 44: 1–19.

----- 2013. *Early Greek Mythography. Volume 2: Commentary.* Oxford University Press.

Fränkel, Hermann. 1938. "Heraclitus on the Notion of a Generation." *American Journal of Philology* 59: 89–91.

Geus, Klaus. 2002. *Eratosthenes von Kyrene : Studien zur hellenistischen Kultur- und Wissenschaftsgeschichte.* C. H. Beck.

Grafton, Anthony T., and Noel M. Swerdlow. 1985. "Technical Chronology and Astrological History in Varro, Censorinus and Others." *The Classical Quarterly* 35: 454–465.

Grafton, Anthony, and Megan Williams. 2008. *Christianity and the Transformation of the Book. Origen, Eusebius, and the Library of Caesarea.* Harvard University Press.

Grote, George. 1869. *A History of Greece.* Vol. II. John Murray.

Hellmann, Oliver, and David Mirhady. 2017. *Phaenias of Eresus. Text, Translation, and Discussion.* Routledge.

Heubeck, Alfred. 1974. *Die homerische Frage.* Wissenschaftliche Buchgesellschaft.

Huxley, George. 1973. "The Date of Pherekydes of Athens." *Greek,*

Roman, and Byzantine Studies 14: 137–143.

Jacoby, Felix. 1902. "Die Attische Königsliste." *Klio* 2: 406–439.

----- 1904. *Dar Marmor Parium*. Weidmannsche Buchhandlung.

----- 1923–1958. *Die Fragmente der griechischen Historiker*. 3 volumes. Weidmann.

Jahn, Otto. 1965. *Censorini De Die Natali Liber*. Georg Olms Hildesheim.

Fox, Robin L. 2008. *Travelling Heroes*. Vintage Books.

Gladstone, William E. 1858. *Studies on Homer and the Homeric Age*. Oxford at the University Press.

Heubeck, Alfred, Stephanie West, and John B. Hainsworth. 1988. *A Commentary on Homer's Odyssey*. Volume 1. Clarendon Press.

Hornung, Erik, Rolf Krauss, and David A. Warburton, editors. 2006. *Ancient Egyptian Chronology*. Brill.

Huffman, Carl A. 1993. *Philolaus of Croton. Pythagorean and Presocratic*. Cambridge University Press.

Huxley, George L. 1962. *Early Sparta*. Harvard University Press.

Jahn, Otto K. 1845. *Censorini De Die Natali Liber*. G. Reimeri.

Jacoby, Felix. 1902. *Apollodors Chronik. Eine Sammlung der Fragmente*. Weidmannsche Buchhandlung.

----- 1902. "Die Attische Königsliste." *Klio* 2: 406–439.

----- 1904. *Das Marmor Parium*. Weidmannsche Buchhandlung.

Janko, Richard. 1982. *Homer, Hesiod and the Hymns*. Cambridge University Press.

Jeffery, Lilian H. 1962. "Writing" In: Wace, Alan J. B. Wace, and Frank H. Stubbings, editors. *A Companion to Homer*. Macmillan and Company Limited. 545–560.

Jensen, Minna S. 1980. *The Homeric Question and the Oral-Formulaic Theory*. Museum Tusculanum Press.

----- 2011. *Writing Homer*. The Royal Danish Academy of

Sciences and Letters.

Kebric, Robert B. 1977. *In the Shadow of Macedon: Duris of Samos.* Steiner.

Kirk, Geoffrey S. 1988. *The Iliad: A Commentary. Volume I: books 1–4.* Cambridge University Press.

----- 1962. *The Songs of Homer.* Cambridge University Press.

Helm, Rudolf. 1913. *Eusebius Werke. Siebenter Band. Die Chronik des Hieronymus.* J. C. Hinrichs.

Kõiv, Mait. 2011. "A Note on the Dating of Hesiod." *The Classical Quarterly* 61: 355–377.

Kullmann, Wolfgang. 1960. *Die Quellen der Ilias.* Franz Steiner.

Latacz, Joachim. 1989. *Homer. His Art and his World.* trans. James P. Holoka. The University of Michigan Press.

Lattimore, Richmond. 1951. *The Iliad of Homer.* The University of Chicago Press.

Leaf, Walter. 1900. *The Iliad.* Macmillian and Co.

Lévy, Edmond. 2007. "Sosibios le Laconien" In: *Athénée et les fragments d'historiens. Actes du colloque de Strasbourg 16–18 juin 2005*, 277–289. Dominique Lenfant, editor. De Boccard.

Lorimer, Hilda L. 1950. *Homer and the Monuments.* Macmillan & Co.

Lowenstam, Steven. 2008. *As Witnessed by Images. The Trojan War Tradition in Greek and Etruscan Art.* The Johns Hopkins University Press.

Mansfeld, Jaap. 1983. "Apollodorus on Democritus." *Hermes* 111: 253–258.

Markianos, Sophocles S. 1974. "The Chronology of the Herodotean Solon." *Historia* 23: 1–20.

Meyer, Eduard. 1892. "Herodots Chronologie der griechischen Sagengeschichte." *Forschungen zur Alten Geschichte* 1: 151–209.

Miller, Molly. 1970. *The Sicilian Colony Dates.* SUNY Press.

Mitchell, Fordyce. 1956. "Herodotos' Use of Genealogical
   Chronology." *The Phoenix* 10: 48–69.

Möller, Astrid. 2005. "Epoch-making Eratosthenes." *Greek, Roman,
   and Byzantine Studies* 45: 245–260.

Molneux, John. 1992. *Simonides: A Historical Study*. Bolchazy-
   Carducci.

Mountjoy, Penelope A. 1999. "Troia VII Reconsidered." *Studia Troica*
   9: 295–346.

Morris, Ian. 1986. "The Use and Abuse of Homer." *Classical Antiquity*
   5: 81–138.

Morris, Ian, and Barry B. Powell. 1997. *A New Companion to Homer*.
   Brill.

Mosshammer, Alden A. 1977. "Phainias of Eresos and Chronology."
   California Studies in Classical Antiquity. 10: 105–132.
   ----- 1979. *The Chronicle of Eusebius and Greek Chronographic
Tradition*. Bucknell University Press.

Most, Glenn W. 2006. *Hesiod: Theogony, Works and Days,
Testimonia*.
   Harvard University Press.

Nagy, Gregory. 1992. "Homeric Questions" *Transactions of the
   American Philological Association* 122: 17–60.

Nails, Debra. 2002. *The People of Plato: A Prosopography of Plato and
   Other Socratics*. Hackett Publishing Company.

Novello, Alfredo. 2017. "Sui racconti di fondazione di Cos."
   Erga-Logoi 5.

Osborne, Robin. 1996. *Greece in the Making*. Routledge.

Panchenko, Dmitri. 2000. "Democritus' Trojan Era and the
   Foundations of Early Greek Chronology." *Hyperboreus* 6: 31–78.

Pfister, Friedrich. 1913. "Die Lokalhistorie von Sikyon bei Menaichmos,
   Pausanias und den Chronographien." *Rheinisches Museum* 68:

529–537.

Podlecki, Anthony J. 1984. *The Early Greek Poets and their Times.* University of British Columbia Press.

Powell, Barry B. 1991. *Homer and the Origin of the Greek Alphabet.* Cambridge University Press.

Pownall, Frances Anne. 2004. *Lessons from the Past. The Moral Use of History in Fourth-Century Prose.* University of Michigan Press.

Prakken, Donald W. 1940. "Herodotus and the Spartan King Lists." *Transactions and Proceedings of the American Philological Association.* 71: 460–472.

----- 1943. *Studies in Greek Genealogical Chronology.* Lancaster Press.

Prandi, Luisa. 1996. *Fortuna e Realtà dell'Opera di Clitarco.* Franz Steiner Verlag.

Quinn, Josephine. 2018. *In Search of the Phoenicians.* Princeton University Press.

Raaflaub, Kurt A. 1998. "Homer, the Trojan War, and History." *The Classical World* 91: 386–403.

Rose, Brian. 2014. *The Archaeology of Greek and Roman Troy.* Cambridge University Press.

Rose, Herbert J. 1931. *A Handbook of Greek Literature.* Methuen and Co. Ltd.

Rotstein, Andrea. 2016. *Literary History in the Parian Marble.* Harvard University Press.

Salmon, John B. 1997. *Wealthy Corinth: A History of the City to 338 BC.* Sandpiper Books Ltd.

Samuel, Alan Edouard. 1972. *Greek and Roman Chronology.* C. H. Beck.

Schadewaldt, Wolfgang. 1959. *Von Homers Welt und Werk.* K. F. Koehler.

Schefold, Karl. 1966. *Myth and Legend in Early Greek Art.* Audrey Hicks, translator. Harry N. Abrams, Inc., Publishers.

----- 1992. *Gods and Heroes in Late Archaic Greek Art.* Alan Griffiths, translator. Cambridge University Press.

Sealey, Raphael. 1957. "From Phemios to Ion." *Revue des Études Grecques* 70: 312–355.

Shaw, Pamela-Jane. 2003. *Discrepancies in Olympiad Dating and Chronological Problems of Archaic Peloponnesian History.* Franz Steiner Verlag.

Stanley, Keith. 1993. *The Shield of Homer. Narrative Structure in the Iliad.* Princeton University Press.

Stronk, Jan P. 2010. *Ctesias' Persian History.* Wellem Verlag.

Taplin, Oliver. 1992. *Homeric Soundings.* Oxford University Press.

Tarrant, Harold. 1993. *Thrasyllan Platonism.* Cornell University Press.

Thibodeau, Philip. 2019. *The Chronology of the Early Greek Natural Philosophers.* Cosmographia.net.

Thomas, Rosalind. 1989. *Oral Tradition and Written Record in Classical Athens.* Cambridge University Press.

Ventris, Michael, and John Chadwick. 1959. *Documents in Mycenean Greek.* Cambridge at the University Press.

Verbrugghe, Gerald P., and John M. Wickersham. 2001. *Berossos and Manetho, Introduced and Translated. Native Traditions in Ancient Mesopotamia and Egypt.* University of Michigan Press.

Wade-Gery, Henry T. 1952. *The Poet of the Iliad.* Cambridge at the University Press.

van Wees, Hans. 1994. "The Homeric Way of War: The *Iliad* and the Hoplite Phalanx (II)." *Greece & Rome* 41: 131–155.

----- 1997. "Homeric Warfare." In: Morris and Powell, 668–693.

----- 2002. "Homer and Early Greece." *Colby Quarterly* 38: 94–117.

West, Martin L. 1966. *Hesiod Theogony.* Oxford University Press.

-----   1978. *Hesiod Works and Days*. Oxford University Press.

-----   1995. "The Date of the *Iliad*." *Museum Helveticum* 52: 203–219.

-----   2003. "*Iliad* and *Aethiopis*." *The Classical Quarterly* 53: 1–14.

West, Stephanie. 1988. "The Transmission of the Text." In: Alfred Heubeck, Stephanie West, and John B. Hainsworth. *A Commentary on Homer's Odyssey*. Volume 1. Clarendon Press. 33–50.

Wehrli, Fritz, editor. 1969. *Die Schule des Aristoteles. Texte und Kommentar. Phainias von Eresos, Chamaileon, Praxiphanes*. Benno Schwabe & Co.

von Wilamowitz-Moellendorff, Ulrich. 1916. *Die Ilias und Homer*. Weidmann.