

How the Athenian Plague Affected the Topography of Athens and Vice Versa

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Diseases have been the biggest killers of humans. Some of the deadliest diseases that have afflicted humanity, including smallpox, the flu, tuberculosis, malaria, the bubonic plague, measles, and cholera, are "infectious diseases that evolved from diseases of animals, even though most of the microbes responsible for our own epidemic illnesses are paradoxically now almost confined to humans." By around 10,000 B.C. agricultural communities and domesticated animals were appearing. Along with the perks of agriculture, such as a generally more reliable and nutritious food supply, came some major setbacks, like epidemics of crowd diseases, some of which were previously mentioned. Crowd diseases could "not sustain themselves in small bands of hunter-gatherers and slash-and-bum farmers." An entire group could be wiped out by a disease from the environment or a foreigner due to the lack of antibodies among the small groups, leaving diseases unable to transition to an epidemic status as the populations had limited interactions. They did have infections, "but only of certain types," with some "caused by microbes capable of maintaining themselves in animals or in the soil, with the result that the disease [didn't] die out but remain[ed] constantly available to infect people," while others were chronic diseases, and some were "nonfatal infections against which [people] don't develop immunity to," meaning the same person can become re-infected after recovering (Diamond, 197- 204). According to Jared Diamond, the crowd diseases "could have arisen only with the buildup of large, dense human populations," which "began with the rise of agriculture . . . and then accelerated with the rise of cities starting several thousand years ago" (Diamond, 204-205). Hunter-gatherers had frequently shifted camp and left behind trash and fecal matter, whereas sedentary populations have lived amid their own sewage, "thus providing microbes with a short path from one person's body into another's drinking water" (Diamond, 205). Irrigation, fish farming, and forest clearings can also be breeding grounds for various microbes or carriers of certain diseases. In past years it has been proven that many of the "crowd" infectious diseases originated from diseases carried by domesticated animals. As is the case with humans, "epidemic diseases require large, dense populations" among animals and are "confined mainly to social animals providing the necessary large populations. Hence when [humans] domesticated social animals, such as cows and pigs, they were already afflicted by epidemic diseases just waiting to be transferred to" humans (Diamond, 206).

Throughout history there have been several major epidemics; such as the Plague of Justinian which began in 541 A.D. and continued on and off for 200 years, the bubonic plague which ravaged Europe mainly between 1347 and 1353 A.D., the smallpox epidemic brought to the Americas by Europeans, and the influenza Pandemic of 1918 are just a few of such. Another was the Athenian plague which devastated Athens for four to five years. It first struck the city in May 430 B.C., then it struck a second time in 429 B.C., and again in the winter of 427-426 B.C. (

Plague of Athens). Thucydides depicted the se outbreaks in Athens as "virgin-soil epidemic[s]" as the disease had a "high attack rate and an unvarying course in persons of different ages, sexes and nationalities" (Littman, 456-461). It is estimated that one-fourth to one-third of the Athenian population was killed, ranging from at least 30,000 deaths to as many as 100,000 (*Plague of Athens*; Littman, 456). Such a devastating epidemic would have resulted in topographical changes for a city on its own, as the inhabitants would be left incapacitated to do any major building projects, try to appease the gods, and then appease themselves as they realized the futility of the situation. Furthermore, they would have to deal with the growing number of the dead. However, in addition to the plague, the Athenians were also fighting a major war, which further affected building as resources were spread thin, the political situation continued to change, more of the population was being killed, and conditions created inside the city due to the refugees and soldiers allowed the epidemic to thrive.

The disease that caused this epidemic is unknown. Scholars have thought it was various diseases including the bubonic plague, smallpox, typhus, cholera, typhoid fever, Ebola, ergot toxin, anthrax, or measles, just to name a few (Horgan; *Plague of Athens*). Some scholars have tried arguing that it was a combination of diseases, however the majority think that is unlikely for a couple of reasons. Most of what scholars know about the plague comes from Thucydides' accounts, as he was not only a witness to the epidemic, but a survivor as well. He wrote that it "originated in Ethiopia and spread into Egypt and Libya and through the Near East before arriving at Piraeus," and once it arrived at Piraeus it quickly moved through Athens. He also mentioned that those who survived it, developed an immunity, which counters the idea that it was multiple diseases. Some of the symptoms he described were "redness and inflammation in the eyes, the inward parts, such as the throat or tongue, becoming bloody and emitting an unnatural and fetid breath. These symptoms were followed by sneezing and hoarseness, after which the pain soon reached the chest, and produced a hard cough. When it fixed in the stomach, it upset it; and discharges of bile of every kind named by physicians ensued, accompanied by very great distress." Also "externally the body was not very hot to the touch, nor pale in its appearance, but reddish, livid, and breaking out into small pustules and ulcers. But internally it burned so that the patient could not bear to have on him clothing or linen even of the very lightest description; or indeed to be otherwise than stark naked. What they would have liked best would have been to throw themselves into cold water; as indeed was done by some of the neglected sick, who plunged into the rain tanks in their agonies of unquenchable thirst" and towards the end many suffered from "severe diarrhea." Another important factor that Thucydides noted was that all "birds and beasts that prey upon human bodies, either abstained from touching them (though there were many lying unburied) or died after tasting them" (qtd. in *The Plague*, 2.48.1- 2.50.2). None of the diseases mentioned above match all of the symptoms Thucydides described. It is very possible that the symptoms "may have mutated over time, or that the plague was caused by a disease that no longer exists," (*Plague of Athens*).

Just prior to the first onslaught of the epidemic, was the start of the Peloponnesian war. The Peloponnesian war broke out around 431 B.C. due to tensions between the Athenian Empire and the Peloponnesian League, which was led by the Spartans. Who exactly is to blame for the war has been disputed as Thucydides tried and succeeded in making his account concerning the war "scientific, not epic; abstract, not emotional." He wanted the war

to be about the imbalance between the states, not individuals. Many readers of Thucydides believe the Athenians goaded the Peloponnesians into war, however some scholars do blame the Spartans or Corinthians for starting the war, like Donald Kagan (Tannenbaum, 535-536). In 433 B.C. Athens allied itself with Corcyra, which was a former colony of Corinth and their rival at the time. Corinth was at war with Corcyra at the time, fighting over Northwestern Greek colonies. Athens made this defensive alliance around when the Corinthians were planning to attack, thus making it impossible for Corinth to carry through with their advances, forcing the city state to stop the war and surrender. This parallels the start of the first Peloponnesian war (460-446 B.C.), when Athens aligned itself with Megara "with whom Corinth was then at war...that caused Corinth, and ultimately the Peloponnesian League, to make war on Athens," thus it is likely that Athenian politicians knew that by aligning Athens with Corcyra, they were risking war. To add fuel to the fire, Athens ordered the Potidaeans to "tear down part of their wall, to hand over hostages, and to expel the present (and refuse future) Corinthian chief magistrates," and Potidaea was a Corinthian colony, but a subject-state of the Athenian empire. This caused the Corinthians to encourage a revolt and sent "volunteers" and mercenaries to Potidaea. There were other back and forth issues, and eventually Sparta had enough of Athens as a great empire, and the war commenced (Tannenbaum, 537-540). The war lasted until 404 B.C., when the Athenians lost a fleet at Aegospotami in the Hellespont. There was a temporary halt to the war with the Peace of Nicias in 421 B.C., and the peace lasted until the Sicilian Expedition (415-413 B.C.).

Since the first wave of the Athenian plague broke out so soon after the war started, the Athenians initially blamed the Spartans. Thucydides mentioned that " the Peloponnesians had poisoned the reservoirs" of Piraeus, and then the sickness traveled to the heart of Athens (qtd. in *The Plague*, 2.48.2). Poisoning water was not unheard of in ancient Greece. In 590 B.C., Kirrha, Greece was defeated by poison in their water supplies. There had been a rule declared after the First Sacred War against poisoning water supplies, however "many incidents and rumors of poisoning besieged towns and enemy troops were recorded" after the incident at Kirrha (Mayor, 106). Initially, I thought the Athenian plague would have spread similarly to the London cholera outbreak in 1854. However, Athenian water supplies were not connected, and depending on what disease the epidemic was, it may not have been water-borne. Out of the main ones previously listed, only typhoid fever and cholera are transmitted easily through water, but others, such as Ebola , can be transmitted through bodily fluids, so if the sick threw themselves into public water supplies, as Thucydides mentioned, it could be possible that the water became contaminated. However, this would not have caused the widespread outbreak of the disease as water sources were localized. The plague and fear of poisonings promoted modernization of the water system of Piraeus. Thucydides mentioned that there were "no wells" in Piraeus. Instead they had relied on cisterns, which were not connected to any other water sources and were "unassociated with sewage channels" (qtd. in *The Plague*, 2.48.2; Morens and Littman, 284). The polis of Athens relied on wells for water, which were on higher ground, so ground sources would have flowed from Athens to Piraeus, not vice versa (Javier, 139; Morens and Littman, 284). It is possible that Meton, the Athenian astronomer, constructed wells in Piraeus before 414 B.C., possibly during the Peace of Nicias (Hope and Marshall, 60). Unfortunately, there is no exact record that could be used to determine precisely when Piraeus made the switch from

cisterns to wells. However, if much of the population believed that the cisterns had been poisoned by the Spartans, as Thucydides makes it seem, that would provide incentive to modernize the water-supply to prevent any future poisonings as quickly as possible. Peace from the war during the Peace of Nicias would not only allow the time to build wells, but also the money and manpower would be more readily available during a halt in the conflict.

Prior to the war and before the epidemic, the Athenian population would have been at least 100,000 people, with Gomme believing it was as high as 155,000 consisting of "60,000 citizens, 25,000 metics, and 70,000 slaves." Athens had a very powerful navy, but could not match the Spartan army on land, so the Spartans laid siege to Athens over land, where they knew they would have an advantage. Pericles responded to the Spartan siege by asking the Athenians who lived outside of the city walls to move within. This increased the population to 300,000 to 400,000, with many modern scholars estimating the number was closer to the latter (Morens and Littman, 276). The introduction of so many people led to changes of the topography, and increased the spreading and deadliness of the plague, which resulted in further topographical changes. Since there was a large influx of people into such a small area in a short period of time, there was "not enough space inside the city's walls to house all the refugees from the countryside without overcrowding, and the majority had to camp out in any open space," including in the temples and sanctuaries (Martin). This influx also turned the area in between the long walls connecting into a shanty-town-esque area, as not everyone could move in with their relatives or had relatives to take them in. There were probably around 10,000 dwellings in between the long walls, with 10 to 40 people per dwelling during the siege (Littman, 461). It "overstretched the city's infrastructure and resources," and turned essentially any open space into a shelter, and additionally altered the use of public and religious buildings, such as the temples and fountain houses, to be places where the diseased and dead were congregated (Martinez, 136). "Dead bodies in the temples and the dying crawling in the streets - or driven by a raging thirst - massed around the fountain houses," just trying to find relief and help from their suffering (Camp, *The Archaeology of Athens*, 118). Due to the overcrowding and unsanitary conditions, "the mortality was. . .without all form; and dying men lay tumbling one upon another in the streets, and men half-dead about every conduit through desire of water. The temples also where they dwelt in tents were all full of the dead that died within them (qtd. in *The Plague*, 2.52). The refugees living between the long walls, were very vulnerable to the lack of water sources, as prior to the arrival of the country dwellers, the water supply was adequate for the environment, and there were no additional resources built to accommodate the addition of the refugees (Iversen, 48). In addition to inadequate water supplies, the crowding caused by the refugees also led to inadequate food supplies and an increase in insects, lice, rats, and waste. In such close quarters, with the diseased and dead being found almost everywhere, including in the public water supply and frequently visited areas of the city, the disease had no limits to who and how it could spread, especially in the overcrowded areas where there was poor air, poor sanitation, and a lot of close contact. With lack of food came lack of nutrition, making people more vulnerable. There were also no areas officially quarantined, so some people refused to leave their homes and doctors often refused to see their patients as they became afflicted (Longrigg, 213).

The burial practices of Athenian society changed as well since the city quickly developed an issue of discarding the bodies of the deceased which began to pile up and putrefy throughout the city. So, as with many other epidemics, mass plague burials were added to the topography of Athens. During the mid-nineties, a mass burial site containing at least one-hundred-fifty bodies was excavated in the Kerameikos ancient cemetery of Athens. The mass grave was a basic pit, of an irregular shape "6.50 m long and 1.60 m deep." The bodies were discovered laid out in a disorderly fashion in more than five successive layers, with no soil between the layers of bodies, indicating the bodies were thrown on top of one another. The bodies at the lower level were placed more distant from each other, although the manner of their placement remained more or less as disordered as in the upper layers. Overall, more care for the burial of the dead seemed to have been taken at the lower levels of the mass grave, possibly before the epidemic was in full swing. The upper levels indicated that the grave was completed in a very "hasty, improper and impious manner," with such certainty that it was not possible for these individuals to be war dead. It was likely that the Athenians "hastily buried a large number of hapless and poor dead people as a means to protect its still-surviving population from an epidemic." Among the dead of the upper layer, eight pot burials of infants were found. Contrary to the careless inhumation of the adults that were buried in the same pit, children seemed to have had special care at their burial. Overall, "the quality and quantity of the offerings was extremely poor and absolutely disproportionate to such a large number of buried people." The majority of the vases found in the grave were dated around 430 B.C., with only some dating to the decade of 420 B.C., further supposing that most of the grave goods with the burials, and thus the burials themselves, were from the plague. To be buried without burial rites was as degrading as to "be disposed of like an animal." The fact that so many burials were so inadequate emphasizes the dire situation that Athens was facing (Papagrigorakis, Manolis J, et al.; Lindenlauf, 87). There were neither as many mass burials nor as many individuals in this mass burial, as one may suspect because usually the relatives of the deceased went with more common ways of burial, like cremations or individual inhumations, wherever room could be found (Papagrigorakis, Manolis J, et al.). Also, mass burials of "uncremated bodies were rare in Classical Greek society" and were "linked with times of pestilence," hence this mass grave's existence (Martinez, 142). A more frequent sight and disposal method was the use of funeral pyres. Thucydides described the chaos with the funeral pyres: "when one had made a funeral pile, another getting before him would throw on his dead and give it fire. And when one was in burning, another would come and, having cast thereon him whom he carried, go his way again," completely disregarding the proper traditions (qtd. in *Political Consequences of the Plague of Athens*, 137 (2.52)).

One of the most important Athenian historical figures who fell victim to the plague was Pericles. Pericles was a brilliant and skillful politician, general, and orator, described as "the first citizen" of democratic Athens, according to Thucydides. Pericles' time in power coincided with a period of "Athenian political and economic dominance as well as time when art, theater, philosophy, and democracy flourished to a degree not seen before and only rarely since," and is often considered the high point of the Classical period (Camp, *The Archaeology of Athens*, 72). This time period, from about 449 to 431 B.C., which were years of peace between the Persian and Peloponnesian wars, is often referred to as the "the Golden

Age" or apogee of Athens (Camp, *The Athenian Agora*, 77). After a failed Athenian attack on the Persian in 454 B.C., Athens took over the Delian League's treasury, and three years later a coinage decree "imposed Athenian weights and measures throughout the league." During the 440s and 430s, Pericles utilized the treasury to fund "cultural projects" in Athens, including many on the Acropolis like the temple of the Athena Nike, the Parthenon, and the Propylaia. In the lower city, it is possible that the Hephaisteion was under construction during this period and "the Odeion south of the Acropolis certainly dates to the 440s." As many as a dozen temples and other structures can be attributed to the Periclean building program of the third quarter of the fifth century B.C. (Camp, *The Athenian Agora*, 63). However, when the Peloponnesian war broke out, construction on the structures for the Periclean building program stopped, leaving many unfinished, like the Propylaia on the Acropolis, while others were only left unfinished temporarily. Neither the war nor the plague though could fully stop Athenian building, although both did alter it due to the labor force, cost, and death of Pericles (Camp, *The Athenian Agora*, 63). During the first outbreak of the plague, his two legitimate sons were killed, and he died a few months later in 429 B.C.

During the years of the Plague outbreaks, all major construction projects were halted and nothing new was started. Pericles estimated the manpower of Athens at the beginning of the war was 13,000 hoplites, and 16,000 others on garrison duty at home, as Pericles' strategy did not involve fighting the Peloponnesians armies on land outside of the city walls. He also estimated "1,200 cavalry including mounted archers, 1,600 archers, and the crews of 300 Triremes," which would have been around 60,000 men (Smith, 360). Triremes consisted of crews of about 200 men. The crew included the captain, and about 10 dignitaries, 2 archers- bowmen, 14 soldiers and 170 or 180 oarsmen. 200 multiplied by 300 of these ships, is about 60,000 men (*Ancient Greek Trireme*). Although not many of these soldiers were from the main city of Athens itself, some were, and some were from the demes, surrounding the city, which had listened to Pericles and moved within the walls. Athens prided itself in the fact that free citizens made up its naval crews (*What was ancient Athens' military like*). However, slaves were sometimes soldiers in the army or attendants to the soldiers. Often times they were in the army as noncombatants and helped "prepare food, act[ed] as guides, rescue[d] wounded men, serve[d] as attendants to generals, carr[ied] important messages," and most often were the general caretakers of the hoplites' armor and their assistants (Pritchett, 51). For some battles there were as many as one slave per hoplite. Both slaves and freemen worked on the construction of monuments, religious structures, and public buildings in Athens, however the majority of workers were slaves (*Why the Parthenon was built*). Due to both the freemen and slaves of Athens being involved in the war, and the devastation brought on by the plague, there was just not a sufficient labor force for construction. The plague also did not just strike the main city of Athens, it afflicted the Athenian soldiers too, meaning even fewer men were available for construction labor when fighting was calm. According to Thucydides, "Hagnon at Potidaea lost 1,050 out of 4,000 hoplites in forty days as a result of the plague" (Smith, 361). The crowded and unsanitary conditions of the Athenian army camps provided an atmosphere similar enough to Athens, so that the plague still struck with a very high mortality rate, a little over twenty-five percent. As the epidemic slowed and stopped, building was able to commence again. The plague would also have an effect on the number of soldiers and able

workers available later in the war, as the plague killed many children and women of child-bearing age, thus decreasing the birth rate and population.

However, thanks to the devastation brought by the plague and the randomness of the victims, building emphasis shifted from "religious structures to civic ones" (Camp, *The Athenian Agora*, 63). People who were in good health had been struck without warning, as the plague did not discriminate by class, sex, or age (Longrigg, 214). During the initial outbreak of the plague, the people of Athens prayed in temples and asked for the help of the gods. They performed different rituals to try to appease the ones they had thought that they had angered (Longrigg, 216). As with what happened later with the bubonic plague, and other large epidemics, people soon realized that it did not matter whether or not they prayed or did something to appease the gods. People who continued to worship the gods perished, and people who did not worship the gods perished. Others believed that the Gods were supporting Sparta (Paolo, 50). So, why waste the time, money, and energy on gods who were not intervening or who were supporting the enemy? These beliefs led to a decline of the restraint of law and morality, as well as an increase in unnecessary spending, as people did not know when they were going to die and wanted to enjoy the possible little time that they had left (Longrigg 216; qtd. in Hobbes, 2.53). As a result, civic buildings which benefited the public became the priority.

Since Pericles perished, he could not push for all of his previous building projects to be finished. The combination of his death and the plague also spelled disaster for Athens and its future as his "strategies were quickly abandoned and the leaders who followed lacked Pericles' foresight and forbearance," instead "committing even the conduct of state affairs to the whims of the multitude," (*Pericles*). The generals who followed him were Demosthenes, Kleon, Nikias, and Alkibiades (Camp, *The Archaeology of Athens*, 117). The change in strategy and leadership also contributed to the loss of the war, as when Pericles was in charge, it seemed possible that the Athenians were going to win (Starr, Chester G., et al., 184). Thus, the political changes which resulted after Pericles' death also affected the topography of Athens. In 404 B.C., after Athens lost the war, Sparta instructed the Athenians to destroy the long walls, which had been vital to the defense of Athens, and to choose thirty men to "manage the affairs of the polis," resulting in the brief eight-month reign of the Thirty Tyrants (Planeaux). The Thirty Tyrants "were not in power long enough to initiate any serious building projects, though they are associated with a change in orientation at the old meeting place of the Assembly, the Pnyx" the seat of democracy (Camp, *The Archaeology of Athens*, 132). The Thirty Tyrants reversed the arrangement of the auditorium. "A high semicircular retaining wall was built to the north; it supported an earth embankment sloping down to the south, that is, in the opposite direction to the slope in the first period," of the area. The citizens now had their backs to the city, so they would no longer be distracted by "the site of the Agora and of their houses and fields" (Travlos, 466). Also, by reversing the relative positions of speaker and audience from Pnyx one, the Tyrants may have been trying to secure "a more seclusive gathering place, the entrance to which might be more readily controlled," by the new stairs (Kourouniotes, and Homer; 136). The retaining wall also sheltered the area from the north wind (Travlos, 466). Even after Democracy was restored in 403 B.C., very few, if any, comparable building projects to that of Pericles' occurred over the next few decades.

The buildings under Pericles had been "built to the highest standards of aesthetics, engineering and mathematics," and "these white marble structures were decorated with intricate statues and friezes carved by the era's greatest sculptors" (*Pericles*). The buildings built during the rest of the war were "generally more modest in their building materials, made of limestone and mudbrick as opposed to marble, with simple floors of packed earth," so after the plague most of the buildings were not as elaborate or nice as the ones built before the plague and before the war (Camp, *The Athenian Agora*, 63). Some of these buildings were the new Bouleuterion, South Stoa I, the Temple of Athena Nike, the Erechtheion, and the Stoa of Zeus Eleutherios (freedom). A new bouleuterion was built for the senate of five hundred around sometime between 416 and 409 B.C., based on "scraps of associated pottery and literary sources." It was built just a little west of its predecessor, the Old Bouleuterion (Camp, *The Archaeology of Athens*, 127). South Stoa I was a long colonnaded public building also constructed in the Agora. There are dozens of coins and an inscription that "suggest that it served a commercial function." Based on pottery from beneath the floor, the stoa was built around 430-420 B.C., probably after the plague, and as the war began to slow down (Camp, *The Archaeology of Athens*, 127-128). Construction for the Athena Nike began in the 430s and an inscription from 424/3 B.C. of records "for payments of fifty drachmas to the priestess of Athena Nike," is generally seen as evidence that the building and its altar were ready to be put into use in that year indicating that the building had probably been put on pause due to the plague and the war (Camp, *The Archaeology of Athens*, 92). There is no precise evidence for when the construction of the Erechtheion began, and it is possible that construction may not have started "until the late 430s," or the late "420s" after the Peace of Nikias, and it was under non-continuous construction during the war, and presumably during the plague as well if it had started that early (Camp, *The Archaeology of Athens*, 95; Thanjan, 116). The architectural details of the Stoa of Zeus Eleutherios suggests that the building should be dated to the years around 430 - 420 B.C., and is "unusual in that it is dedicated to Zeus, but takes the form of a civic or public building rather than a temple" (Camp, *The Archaeology of Athens*, 104). The epithet for the name "is said to derive from the freedom the Greeks won at the battle of Plataia [in 479 B.C.], the final victory over the Persians on Greek soil" (Camp, *The Archaeology of Athens*, I 04). It may have been chosen to be built then to raise morale within the citizens in regard to the current war that they were fighting. It is a good example though of the polis not wanting to build a religious building for a god, after the plague.

One religious structure that did come as a direct result of the plague was the Temple of Asklepeion. Asklepius was the god of medicine and healing (Caton, 8; Mitchell-Boyask, 3). According to legend, Asklepius, was the son of Apollo and Koronis (a mortal woman), and was born in the Hieron valley, the Argolic peninsula, so his principal sanctuary was located at Epidaurus (Caton, 8). He was born human, acquired divine honors as a hero, and eventually became a full-fledged God (Camp, *The Archaeology of Athens*, 122).

An inscription from the fourth century indicates that the cult of Asklepius was brought to Piraeus, which is where the Plague broke out first. Then in 420 B.C., an Athenian named Telemachus established the Asklepieion on the south slope of the Acropolis. It is likely, that this was Telemachus' first opportunity to bring the cult to Athens, thanks to the Peace of

Nicias (Mitchell-Boyask, 106-7). This Athenian shrine is like no other Asklepius sanctuary in neither form nor function. Even then urban crowding was associated with unsanitary conditions, so "Asklepius sanctuaries tended to be extra-urban, if not rural, in location." There was also a prevalent belief at the time that the more effort it took to reach a holy place, the greater the reward for the traveler. So, this made more remote locations for the temples more favorable too. It was thought that "sanctuaries need to be separated from everyday life to preserve their sanctity and enhance the experience of the worshipper." The Athenian Asklepieion does not fit this pattern as it was amongst the urban crowding and easy to access, with it being located on the slope of the Acropolis within the city wall. It may have been built so close to the Theater of Dionysus because of "traditional associations between song and healing in Greek culture." Asklepius and Dionysus also share some similarities in their histories. Like Asklepius, Dionysus was saved by his divine father from the burning corpse of his mother, and Dionysus himself later killed his mortal lover Ariadne for betraying him with Theseus." Asklepius also helped Dionysus, in that he mediated between Dionysus and more ascetic gods such as Apollo and Artemis. Another reason why the sanctuary could have been built so close to the theater is that Asklepius developed a strong link with poetry, and the theater at Epidaurus was very famous. Asklepius was represented as "a patron of the arts of the word" (Mitchell-Boyask, 3-115). Also, according to Caton, "the locality was probably as healthy as any of the immediate neighborhood of Athens, could supply. The heat was no doubt great in summer, but we may conclude that a large grove of trees afforded grateful shade to the sick" (Caton, 122).

Prior to the Asklepieion, Athena had been worshipped on the Acropolis as Athena Hygieia "Athena of Health" and her function as goddess of health was directed to the well-being of the community as a whole," (Mitchell-Boyask, 116). The cult of Asklepius essentially made the cult of Athena Hygieia obsolete, after she failed to help save the population from the raging plague. Athena Hygieia received state sacrifices at the annual Panathenaia, at least during the fourth century, but no "private dedications to her can be dated after 420/19," when the cult of Asklepius was brought in (Hurwit, 199). The statue of Athena Hygieia is said to have been dedicated after Pericles' favorite workman fell, and was miraculously healed after Athena told Pericles what medicine to use in a dream, but it is likely that the statue was actually dedicated after Pericles died, during the plague outbreak, in hopes that she would help remedy the plague (Hurwit, 199). In addition to Asklepius, some other cult activity can be attributed to the plague as well. Pausanias recorded that on the Acropolis there were two statues named Hygieia. One was a statue of Asklepius' daughter Hygieia, and the other was that of Athena Hygieia (Mitchell-Boyask, 162). In the Agora, a statue made by Kalamis was "dedicated to Apollo Alexikakos (Averter of Evil) for his help in stopping the epidemic (Pausanias 1.3.3) and another to Herakles Alexikakos was set up in his sanctuary near the Agora" (Camp, *The Archaeology of Athens*, 124). The cult of Bendis, a healing deity from Thrace, was also introduced to Piraeus (Camp, *The Archaeology of Athens*, 124). By 404 B.C. there was recorded existence of a Bendis sanctuary in Piraeus, located in the eastern part of the port, next to the temple of Artemis Munychia (Janouchova, 100). One last healing deity rose in prominence in Athens during the war, most likely because of the plague: Amphiaraos. He was originally a hero and "lost his life in the war which erupted between the sons of Oedipus. He and his chariot were swallowed up by the earth, after which he became a healing deity. His principal sanctuary was in the territory of

the small city of *Oropos*, on the northeast frontier of Attica" (Camp, *The Archaeology of Athens*, 126).

Although the Athenian plague did not lead to a complete remodeling of Athens, combined with the effects of the war, it left quite a few lasting impacts on Athenian topography. It affected the topography directly through the mass grave and introduction, and thus building for certain cults, as well as wells, the interruption for other building projects and it also caused the new favor of public over religious buildings. It affected the topography indirectly by killing off the great Athenian leader Pericles, who had been in charge of many building projects, and could have possibly led the war in a different direction. It also killed off many able-bodied men and reduced the population who could serve in the later years of the war. Thus, new buildings and construction products were introduced with the changing political situations. The war and the city itself helped maintain the plague, as there were no mandatory quarantines, overcrowding, and gatherings of the sick in very public, frequently visited, areas. In sum, the war, the plague, and the city itself worked in tandem to change the topography of Athens. If the plague had not struck, would Pericles have continued all of his projects that had been put on hold? Would a shift from religious to public works taken place anyway? Would Athens have won the war, and what would that have meant for new construction projects? Unfortunately, there is no way to fully gauge what would have been, only what had resulted.

Literature Cited

Alirol, Emilie, et al.

2011. "Urbanisation and infectious diseases in a globalised world." *The Lancet*, vol. 11, pp. 131- 141., [www3.uah.es /salud-y- enfermedad /pdf/Urbanisation%20and%20infectious%20diseases%20in%20a%20globalised%20 world.pdf](http://www3.uah.es/salud-y-enfermedad/pdf/Urbanisation%20and%20infectious%20diseases%20in%20a%20globalised%20world.pdf).

"Ancient Greek Trireme."

2006. *Www.Trireme.gr*, Plusminus, [www.trireme.gr /en/trireme.html](http://www.trireme.gr/en/trireme.html).

Bums, Timothy W.

2016. "The Problematic Character of Periclean Athens." *On Civic Republicanism: Ancient Lessons for Global Politics*, edited by Geoffrey C. Kellow and Neven Leddy, University of Toronto Press, Toronto; Buffalo; London, pp. 15-40. *JSTOR*, [www.jstor.org/stable /10.3138/j.cttlkk65xt.5](http://www.jstor.org/stable/10.3138/j.cttlkk65xt.5).

Camp, John McK.

2001. *The Archaeology of Athens*. Yale University Press.

1986. *The Athenian Agora: excavations in the heart of classical Athens*. Thames and Hudson.

Caton, Richard

1899. *The temples and ritual of Asklepios, at Epidaurus and Athens*.

Crawford, Gary W., et al.

2017. "Origins of agriculture." *Encyclopcedia Britannica*, Encyclopcedia Britannica, inc., www.britannica.com/topic/agriculture.

Crawley, Richard

2016. "The Plague." *The Plague - Livius*, Livius, [www.livius.org/sources/content /thucydides/the-plague/](http://www.livius.org/sources/content/thucydides/the-plague/).

Diamond, Jared M.

2017. *Guns, germs, and steel: the fates of human societies*. W.W. Norton & Company.

Harper, Kristin & Armelagos, George

2010. "The Changing Disease-Scape in the Third Epidemiological Transition." *International Journal of Environmental Research and Public Health*, Molecular Diversity Preservation International (MDPI), [www.ncbi.nlm.nih.gov/pmc/articles /PMC2872288/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2872288/).

Hillard, Tom W.

2006. "CHILDREN AND THE ONSET OF THE ATHENIAN 'PLAGUE'." *Mediterranean Archaeology*, 19/20, pp. 151- 167. *JSTOR*, www.jstor.org/stable/24668195.

Hobbes, Thomas

"Thucydides, History of the Peloponnesian War Thomas Hobbes, Ed." *Thucydides, History of the Peloponnesian War, THE SECOND BOOK, chapters 47-58*, Perseus Catalogue, www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0247%3Abook%3D2%3Achapter%3D53.

Holladay, A. J. & Poole, J.C. F.

1979. "Thucydides and the Plague of Athens." *The Classical Quarterly*, vol. 29, no. 2, pp. 282- 300. *JSTOR*, www.jstor.org/stable/638096.

Hope, Valerie M. & Marshall, Eireann

2000. *Death and disease in the ancient city*. Routledge.

Horgan, John

2016. "The Plague at Athens, 430-427 BCE." *Ancient History Encyclopedia*, www.ancient.eu/article/939/the-plague-at-149itstr-430-427-bce/.

Hurwit, Jeffrey M.

1999. *The Athenian Acropolis: history, mythology, and archaeology from the Neolithic era to the present*. Cambridge University Press.

Iversen, Torbjom

2011. "149itstre and Consequences Athens 431 – 421 BC." *Plague and Consequences Athens 431 – 421 BC, University of Oslo*, pp. 5-119, www.duo.uio.no/bitstream/handle/10852/23322/149itstre-version-plague-and-consequences.pdf?sequence=3.

Jaffe, Seth N.

2017, *Thucydides on the outbreak of war: character and contest*. Oxford University Press.

Janouchova, Petra

2013. *The Cult of Bendis in Athens and Thrace*. Graeco-Latina Brunensia, pp. 97-106, *The Cult of Bendis in Athens and Thrace*. https://digilib.phil.muni.cz/bitstream/handle/11222.digilib/136470/1_GraecoLatinaBrunensia_22-2017-1_14.pdf?sequence=1.

Kourouniotes, K. & Thompson, Homer A.

1932. "The Pnyx in Athens." *Hesperia*, vol. 1, pp. 90- 217.,
doi:10.2307/146476.

Lindenlauf, Astrid

2001. *Thrown Away Like Rubbish -Disposal of the Dead in Ancient Greece.*
Scholarship, Research, and Creative Work, pp. 86-99, *Thrown Away Like
Rubbish - Disposal of the Dead in Ancient Greece.*

Littman, Robert J.

2009. "The Plague of Athens: Epidemiology and Paleopathology." *Mount Sinai
Journal of Medicine*, no. 76, pp. 456-4 67., [www.academia.edu /33
762119 /The_Plague_of_Athens_Epidemiology_and_Paleopathology.](http://www.academia.edu/33762119/The_Plague_of_Athens_Epidemiology_and_Paleopathology)

Longrigg, J.

"The Great Plague of Athens." *History of Science*, vol. 18, pp. 209-225. SAO/NASA
Astrophysics Data System, [adsbit.harvard.edu//full/1980HisSc..18..209L/0000213
.000.html.](http://adsbit.harvard.edu/full/1980HisSc..18..209L/0000213.000.html)

Martin, Thomas R.

2016. *Pericles: a biography in context.* Cambridge University Press.

Martinez, Javier

2017. "Political Consequences of the Plague of Athens." *Graeco-Latina Brunensia*,
pp. 135-145., doi:10.5817/GLB2017-1-12.

Mayor, Adrienne

2005. *Greek fire, poison arrows, and scorpion bombs: biological and chemical
warfare in the ancient world.* Gerald Duckworth & amp.

Mitchell-Boyask, Robin.

2008. *Plague and the Athenian Imagination. Drama, History, and the Cult of
Asclepius.* Cambridge: Cambridge University Press.

Morens, David M. & Littman, Robert J.

1992. "Epidemiology of the Plague of Athens." *Transactions of the American
Philological Association (1974-)*, vol. 122, pp. 271-304. *JSTOR*, *JSTOR*,
[www.jstor.org/stable /284374.](http://www.jstor.org/stable/284374)

Neiderud, Carl-Johan

2015. "How urbanization affects the epidemiology of emerging infectious
diseases. " *Infection Ecology & Epidemiology*, Co-Action Publishing,
[www.ncbi.nlm.nih.gov /pmc/articles /PMC4481042/.](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4481042/)

Paolo, Charles De.

2006. *Epidemic disease and human understanding: a historical analysis of scientific and other writings*. McFarland.

Papagrigorakis, Manolis J, et al.

2006. "DNA examination of ancient dental pulp incriminates typhoid fever as a probable cause of the Plague of Athens." *International Journal of Infectious Diseases*, Elsevier, www.sciencedirect.com/science/article/pii/S1201971205001785.

"Pericles"

2009. *History.com*, A&E Television Networks, www.history.com/topics/ancient-history/pericles.

"Plague of Athens."

2008. *Plague of Athens -New World Encyclopedia*, New World Encyclopedia, www.newworldencyclopedia.org/entry/Plague_of_Athens.

Planeaux, Christopher

2015. "The Thirty Tyrants." *Ancient History Encyclopedia*, 13 Nov. 2015, www.ancient.eu/The_Thirty_Tyrants/.

Pritchett, William Kendrick

2008. *The Greek state at war*. Univ. of California Press, 2008.

Smith, Gertrude

1919. "Athenian Casualty Lists." *Classical Philology*, vol. 14, no. 4, pp. 351-364. *JSTOR*, JSTOR, www.jstor.org/stable/263500.

Soupios, M A.

2004. *Impact of the plague in Ancient Greece*. Infectious Disease Clinics, pp. 45-51, *Impact of the plague in Ancient Greece*.

Starr, Chester G., et al.

1985. *The Craft of the ancient historian: essays in honor of Chester G. Starr*. University Press of America.

Stem, Rex

2003. "The Thirty at Athens in the Summer of 404." *Phoenix*, vol. 57, no. 1/2, pp. 18-34. *JSTOR*, JSTOR, www.jstor.org/stable/3648486.

Tannenbaum, R. F.

1975. "Who Started the Peloponnesian War?" *Arion: A Journal of Humanities and the Classics*, vol. 2, no. 4, 1975, pp. 533-546. *JSTOR*, JSTOR, www.jstor.org/stable/20163397.

Thanjan, Davis K.

2011. *Pebbles*. Bookstand Publishing.

"The Athenian Plague." *Thresholds of Time RSS*, WordPress, www.csusmhistory.org/faulk006/the-athenian-plague/.

Theodore, Steve

2015. "What was ancient Athens' military like?" *Quora*, Quora, Nov. 20 ADAD, www.quora.com/What-was-ancient-Athens-military-like.

Travlos, John

1980. *Pictorial dictionary of ancient Athens*. Hacker Art Books.

"Why the Parthenon was built."

2017. *The Parthenon at Athens*, Visit-Ancient-Greece, 2017, www.visit-ancient-greece.com/the-parthenon.html.

Wolfe, Nathan D.

1970. "Origins of Major Human Infectious Diseases." *Improving Food Safety Through a One Health Approach: Workshop Summary.*, U.S. National Library of Medicine, www.ncbi.nlm.nih.gov/books/NBK114494/.