Popular and Imperial Response to Earthquakes in the Roman Empire

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Master of Arts

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This thesis titled
Popular and Imperial Response to Earthquakes in the Roman Empire

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ABSTRACT

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This thesis examines popular and imperial response to earthquakes in the Roman Empire period from the reign of Augustus through the reign of Justinian. It examines religious and scientific attitudes towards earthquakes throughout the classical period and whether these attitudes affected the disaster relief offered by Roman emperors. By surveying popular and imperial reactions throughout the time period this thesis shows that Roman subjects reacted in nearly identical manners regardless of the official religion of the Empire. The emperors followed a precedent set by Augustus who was providing typical voluntary *euergetism*. Their responses showcased imperial philanthropy while symbolizing the power and presence of the Roman state even in far off provinces. The paper also examines archaeological evidence from Sardis and Pompeii each of whose unique archaeological circumstances allows for an illustration of methods of reconstruction following earthquakes of massive and moderate size.

Approved: _____________________________________________________________

Jaclyn Maxwell

Associate Professor of History
DEDICATION

To Megan D. and Julius C.
ACKNOWLEDGMENTS

I owe a debt of gratitude to all the specialists in late antiquity at Ohio University. I would like to thank Dr. Jaclyn Maxwell for all her help as my advisor and as my thesis director. Her knowledge of the ancient world, her timely review of drafts, and her ideas for further avenues of inquiry, made this thesis possible. I would also like to thank Dr. Kevin Uhalde for introducing me to many late and post-Roman sources, especially Ammianus Marcellinus, whose descriptive account of the aftermath of the tsunami of 365 C.E. led me to question disaster relief in the Roman Empire. I would also like to thank Dr. Walter Roberts for serving on my thesis defense committee and for his always optimistic reactions to my questions and concerns.
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### LIST OF ABBREVIATIONS

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<tr>
<td>AE</td>
<td>L’Année Epigraphique</td>
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<td>CIG</td>
<td>Corpus Inscriptionum Graecarum</td>
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<tr>
<td>CIL</td>
<td>Corpus Inscriptionum Latinarum</td>
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<tr>
<td>HSCP</td>
<td>Harvard Studies in Classical Philology</td>
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<tr>
<td>IG</td>
<td>Inscriptiones Graecae</td>
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<td>IGR</td>
<td>Inscriptiones Graecae ad res Romanas pertinentes</td>
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<tr>
<td>ILS</td>
<td>Inscriptiones Latinae Selectae</td>
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<tr>
<td>JRS</td>
<td>Journal of Roman Studies</td>
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<td>SEG</td>
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CHAPTER 1: INTRODUCTION

This thesis will survey ancient responses to earthquakes and examine the reasons for imperial relief. From popular religious and scientific attitudes towards earthquakes to imperial political motives for providing assistance for earthquake victims, this elemental force of nature compelled reaction on many fronts. Ordinary people caught in an earthquake responded out of necessity, fear and human nature. Roman Emperors often responded to earthquakes philanthropically to achieve politically practical results.

This study begins by describing attitudes and beliefs regarding earthquakes in antiquity. While this paper deals with the Roman Empire from the principate of Augustus through the reign of Justinian, this chapter first examines attitudes towards earthquakes beginning with the Greeks. The pre-Socratic philosophers were the first to rationally inquire into the cause of earthquakes. Their rational theories were absorbed and disseminated by the Roman imperial elite while religious ideas on earthquakes evolved depending on the prevailing religious and political ideologies. Understanding the general perception of earthquakes will allow some insight into the reasons for both popular and imperial reaction.

Chapters two and three will look closely at popular and imperial reactions to earthquakes from the moment of the earthquake itself to the delegation of disaster relief operations ordered by the emperor. Chapter two will closely examine three well documented seismic events. These case studies will present evidence about the victims and survivors of earthquakes as well as a closer look at the actions taken by an emperor confronted with natural devastation within his empire. The third chapter will survey
popular and imperial response throughout the geographical and chronological span of the Roman Empire. This survey will demonstrate the typical instinctive and learned behavior of the afflicted populations as well as the consistent response of the emperors over half of a millennium.

Chapter four will look at the archaeological record of two cities, Sardis and Pompeii, whose unique circumstances allow the investigation into the effort and methods required to rebuild and repair buildings and cities following seismic events. Sardis was completely destroyed in 17 C.E. and received substantial imperial aid from the Emperor Tiberius. The complete rebuilding of the city allows archaeologists to reconstruct the chronology and plan by which Sardis was re-imagined as a Roman city. Pompeii, along with other Campanian cities, was seriously damaged by an earthquake in 62 C.E., 17 years prior to the eruption of Mt. Vesuvius which buried the city in ash and made it one of the most well preserved classical archaeological sites. Despite the quality of its preservation there is an ongoing debate about the process of reconstruction, the lack of imperial aid, and the economic effects of the earthquake on the city of Pompeii. Nevertheless the archaeological evidence from both sites highlights the disruption to daily life caused by an earthquake.

The final chapter will offer some conclusions concerning the reasons behind imperial response to earthquakes. Many emperors responded to earthquakes and requests for relief in similar manners. This thesis is primarily focused on how emperors responded to natural disasters, specifically earthquakes. The destructive nature of earthquakes and the (semi) permanent nature of ancient buildings offered the possibility of following the
evidence to see how, and for how long cities rebuilt after earthquakes. The consistent response to earthquakes from pagan emperors as different as Augustus and Commodus, to Christian emperors Theodosius and Justinian encouraged the investigation into why the response of such dissimilar emperors happened to be so similar.

Historiography

The historiography on popular and imperial response to earthquakes is minimal. There seem to be no works on popular response to natural disasters probably because most of the responses are based on instinct or fear. Imperial response to natural disaster, however, is mentioned in three important works. Fergus Millar’s *The Emperor in the Roman World* examines the emperor in his role answering petitions and embassies from subjects and cities throughout the empire. Millar argues that the “aftermath of great natural disasters was inevitably the most prominent occasion for imperial liberality.”¹ He does not delve into the specifics of disaster relief, but mentions it in conjunction with imperial munificence and the cycle of petition and response. Stephen Mitchell also cites natural disaster as a prelude to petition and response in his article “Imperial Building in the Eastern Roman Provinces.”² Mitchell’s focus is on imperial building and he argues that natural disasters were one of the main reasons that emperors built in the Eastern provinces. Paul Veyne examines Roman tax exemption and public building as an example of imperial *euergetism* in his book *Bread and Circuses.*³ Each of these authors address limited aspects of imperial response to earthquakes and this thesis synthesizes

their ideas and offers a comprehensive treatment on popular and imperial reaction to earthquakes through analysis of the literary, epigraphic and archaeological sources.

Limitations of Sources

There are certainly some limitations to the sources used to illustrate and understand imperial response to earthquakes. First, as in all of ancient history, there remain a limited number of primary sources dating to the Roman Empire. The sources that do remain were copied for some reason and they were never copied because they had anything to do with Roman Imperial response to earthquakes. Earthquakes were a remarkable occurrence, “but only their dramatic onset is recorded, and the succeeding long period of reconstruction…is neglected.”

The ancient sources rarely provide follow-up information on the return to normalcy as modern journalists have offered in the wake of major earthquakes in Sichuan Province, China in May of 2008 and the Abruzzo Region of Italy in April of 2009. The historians of the past had little interest in long-term social and economic consequences caused by the disruption to daily life and the relief offered by the Roman rulers.

Epigraphic evidence for relief following earthquakes does exist but it is very rare. There are several inscriptions which mention rebuilding following an earthquake, but there are more inscriptions which mention collapse and rebuilding but do not specifically mention earthquakes. These inscriptions are important, but must be used with caution and can not be assigned to earthquake reconstruction with total accuracy. There is also

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5 Ibid.
numismatic evidence which points to rebuilding, but does not specifically mention earthquakes. There are no examples of papyri, ostraka, or wax tablets which provide practical evidence concerning imperial response.⁶

The archaeological evidence concerning reconstruction due to seismic damage is rarely straightforward. Archaeological research methods “have converged on homogeneous research elements of good accuracy only in the past twenty years.”⁷ And a “significant growth” in the interest of seismology and archaeology has only taken place since the 1970’s.⁸ Even where the archaeological evidence is clear regarding reconstruction, as in the case of Sardis, it can only tell part of the story. The site of Sardis can offer a general chronology and illustrate some rebuilding methods, but can not explain what problems the builders may have run into, precisely how the homeless were sheltered, how all that debris was moved, and who comprised the labor force. Pompeii is exceptionally well preserved, but while there had been some consensus on rebuilding and the economic effect of the disaster, new research has raised new questions about these matters. The sources can not reveal everything about imperial aid, but they can illuminate some methods and manners.

Earthquake Science

To understand the reasons for earthquakes it is necessary to know a little bit about the composition of the earth. The earth is made up of several geologic layers. The innermost layer is called the inner core and it is an extremely hot mass of iron and nickel

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⁶ Guidoboni et al., Catalogue, 23.
⁸ Ibid.
that is under such great pressure that it remains solid even though its temperature is approximately 4300 degrees Celsius. The outer core is also composed of iron and nickel but it remains molten at an average approximate temperature of 3700 degrees Celsius. The layer on top of the outer core is called the mantle and it is composed of silicon and magnesium. The mantle is approximately 1800 miles thick and accounts for a majority of the earth’s volume. The lower mantle, closest to the core has a temperature of approximately 3000 degrees Celsius, while the upper mantle, closest to the crust, has an approximate temperature of 1400 degrees Celsius. While the upper mantle is relatively solid, the inner mantle remains fluid enough to permit movement of the outermost layer of the earth, the crust. The crust is the thinnest layer of the earth and is composed of igneous, metamorphic, and sedimentary rocks. The crust is the surface of the earth on which we live. The thickness of the crust varies between five and thirty miles. The solid crust and the relatively solid upper mantle directly below the crust make up what is called the lithosphere. The lithosphere is rocky and brittle while the mantle underneath this lithosphere, called the asthenosphere, is somewhat plastic and allows for viscous movement over long periods of time.

The rocky lithosphere is broken up into large plates called tectonic plates. There are eight major tectonic plates and many minor plates. There are seven continental plates: the African plate, the Antarctic plate, the Australian plate, the Indian plate, the Eurasian plate, the North American plate and the South American plate. Along with the Pacific plate, an oceanic plate, these plates make up the majority of the lithosphere. Tectonic
plates move along the viscous asthenosphere at an average speed between 0.6 and 10 centimeters per year.

The majority of earthquakes occur along these tectonic plate boundaries. An earthquake consists of two phenomena that are felt as an earthquake. The rocks in the lithosphere, our earth’s surface, are under pressure from tectonic plate movement, volcanism, and variations in rock density near the surface. If the “pressure in the rock at some place in the Earth becomes much greater in one direction than in any other, then the rock can crack and slip along that crack.”9 This slip of the rock moves previously continuous rock layers along a line that is called a fault.10 The slip along the fault also sends out seismic waves that continue to shake the ground after the slip has subsided. There are three types of fault orientation that can cause earthquakes: strike slip faults move laterally past each other; normal faults slip downward into the earth; and thrust faults thrust upward out of the earth often causing the uplift of mountains.11 The initial slip of the rock and the subsequent seismic waves can cause the earth to shake and are felt as an earthquake.

The Mediterranean has historically been a very seismically active area. It is at the boundary of two major tectonic plates, the African and the Eurasian, and each of those plates has a boundary with the smaller but still significant Arabian plate along the eastern edge of the Mediterranean. Since most earthquakes occur near the boundaries of these plates, the Roman Empire, which covered most of the territory around the Mediterranean, suffered through scores of earthquakes. From 31 B.C.E., the year in which Octavian

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10 When a fault reaches the visible surface of the earth it is called surface faulting.
defeated Antony and Cleopatra at the Battle of Actium, until the death of Justinian in 565 C.E., the literary, archaeological, and epigraphic sources mention 154 earthquakes. These were not the only earthquakes in this time period but these earthquakes were significant, either in size, destruction or some other sense: minor seismic activity was rarely reported unless it had some religious or political implication.12

Earthquakes can cause damage to human lives and structures in a variety of ways. The initial slip of the fault causes the ground to shake, often in a vertical motion. This motion can cause damage to structures, but is generally not as dangerous as the horizontal motion caused by the seismic waves. These waves cause the ground to shake horizontally which can affect manmade structures especially those made out of inelastic materials like masonry and concrete. Humans and their structures can also be damaged by associated activity like surface faulting. Structures built along land that is subjected to surface faulting are sometimes seen to be swallowed up by the earth. Another associated phenomenon is known as soil liquefaction where water-saturated soil basically turns into liquid during an earthquake. Structures built upon soil that liquefies during an earthquake are liable to be heavily damaged. Earthquakes can also cause landslides, rock slides and tsunamis which can cause significant damage themselves. During or immediately following an earthquake fires often break out. In antiquity open fires used for cooking or for illumination could be upset and result in major fires which devastated cities, especially densely populated urban areas, as much or more than the earthquake itself.

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12 For a discussion on the fragmentary nature of earthquake sources, the filters associated with them, and the role of humans as seismographs see the introduction to Guidoboni et al., Catalogue, 10-12.
Earthquakes were common enough in the Roman world that it is possible to chart people’s attitudes and reaction to them throughout the Imperial period. Some people believed in their supernatural origins while others thought they understood their natural causes. Many people knew their personal best option for reclaiming their lives after an earthquake, whether through prayer or petition. In response to the frequent seismic activity, emperors often followed a precedent set by Augustus in offering fiscal and physical relief to those who lost loved ones and livelihood. While they were common occurrences, they certainly were not every day events and their sudden arrival was always terrifying and often devastating. Emperors understood the impact these disasters could have on the lives of their subjects and the impact their response could have on their political reputation.
CHAPTER 2: CLASSICAL ATTITUDES TOWARDS EARTHQUAKES

Ancient ideas on earthquakes generally took one of two forms: religious or scientific. The early Greeks believed that one god, Poseidon, the god of the sea, was responsible for earthquakes. As early as the sixth century B.C.E., Greek philosophers began to search for a more rational explanation for natural phenomena, including earthquakes. The most famous Greek inquiry into earthquakes is that of Aristotle who first examined the work of some of his pre-classical predecessors and then defined his own theory in *De Meteorologica*. The Romans developed no new scientific ideas concerning earthquakes, but the reputation of the Greeks as skilled natural philosophers encouraged the Romans to compile and epitomize the theories of the Greeks. The Romans of the Republic considered earthquakes as prodigies-unusual occurrences that signified a break in the Republic’s harmonious relationship with the gods. The advent of Christianity brought withdrawal from scientific reasoning and a return to the belief in the direct influence of the divine: now earthquakes were seen as the wrath of God rather than the wrath of Poseidon. Even during this age of faith, the *History of Ammianus* Marcellinus shows that the rational theories of the Greeks, the pagan notions of the Roman religion and the belief in the supernatural involvement of the Christian God existed at one and the same time.
Greek Attitudes

Greek Religious Attitudes

The early Greeks and many thereafter, believed that earthquakes were caused by the god Poseidon. In the Iliad Poseidon describes himself as the son of Cronos and the brother of Zeus and Hades:

Three brothers are we, all sprung from Cronus,
All of us brought to birth by Rhea-Zeus and I,
Hades the third, lord of the dead beneath the earth.
The world was split three ways. Each received his realm.
When we shook the lots I drew the sea, my foaming eternal home,
And Hades drew the land of the dead engulfed in haze and night
And Zeus drew the heavens, the clouds and the high clear sky,
But the earth and Olympus heights are common to us all.13

He is god of the sea, able to whip up a violent storm to wreck Odysseus’ raft but is equally associated with earthquakes.14 Homer calls him the “mighty god of earthquakes,” the “god who shakes the mainland,” and describes him making the mountains and trees quake when he walks.15 Poseidon’s role as earth shaker is even mentioned by Thucydides: he writes that the Spartans “raised up some helot suppliants from the altar of Poseidon, and had taken them away and killed them. They believe that the great earthquake in Sparta was the result of this.”16 The great earthquake of Sparta happened in 464 B.C.E., destroyed much of the city, killed as many as twenty-thousand Spartans, and caused a revolt of the helots aided by other Messenians.17 Poseidon’s wrath at suppliants to his temple being executed was manifested in this enormous natural

13 Iliad, 15.223-230.
14 Odyssey, 5.282-290.
16 Thucydides, History of the Peloponnesian War, 1.128.1.
17 Diodorus Siculus, 11.63.1-4.
disaster which caused massive destruction and loss of life to the Spartans with whom he was angry. In Walter Burkert’s words: “Poseidon remains an embodiment of elemental force; sea storm and earthquake are the most violent forms of energy directly encountered by man…” 18 The destructive force of an earthquake defied a reasonable explanation, the only possible explanation for many Greeks was a vengeful god displaying his wrath.

Greek Scientific Attitudes

Others, however, decided to look for a more rational explanation for earthquakes and other natural phenomena. Philosophers, beginning with Thales of Miletus in the 6th century B.C.E. sought to understand the workings of the natural world without recourse to the gods. The earliest of these natural philosophers were material monists, searching for one primary element that composed all natural matter and caused all motion. The Greek inquiry into the cause of earthquakes continued throughout the Greek classical age and into the late Republican period of Rome. The most famous Greek earthquake theory was put forth by Aristotle in his work De Meteorologica. Though much of the work of the earlier philosophers are now lost, we know about their theories due to the recording of them by Aristotle in the fourth century B.C.E. and especially Seneca in the first century C.E.

Thales of Miletus was the first of the Milesian school of philosophy, and is credited by Aristotle with being the first Greek to examine the principles of nature. Writing in the early sixth century B.C.E., he posited that water was the principal element and therefore the cause of earthquakes. Thales argued that the earth floated upon a body of water.

“whether you call it the ocean, the great sea, or consider it as yet elementary water of a different character and call it merely a humid element.”\textsuperscript{19} He envisioned the earth as a flat disk and compared its buoyancy on the body of water to a heavy ship on the sea. He thought that earthquakes occur when the earth is shaken by the disturbed water.\textsuperscript{20} He provided further evidence by highlighting the fact that during earthquakes it is common for new springs to appear, thus water must be ultimately responsible for the motion.\textsuperscript{21}

The next Milesian to produce an earthquake theory was Anaximenes, who lived in the mid sixth century B.C.E. Anaximenes saw the earth itself as the cause for earthquakes. He thought that excessive moisture or heat dissolve parts of the earth and when these massive pieces fall away they make the earth shake.\textsuperscript{22} He explained that earthquakes generally happen in times of drought or heavy rain since “the earth grows dry in time of drought and breaks up, whereas the rain makes it sodden and destroys its cohesion.”\textsuperscript{23}

Anaxagoras of Clazomenae, who wrote in the middle of the fifth century B.C.E., theorized about earthquakes and is cited by Seneca and Aristotle. Unfortunately each author attributes a different theory to Anaxagoras. Seneca writes that Anaxagoras ascribed earthquakes to fire. Clouds inside the earth collide with each other and “fire flashes out from this collision of clouds and from the rush of air that is forced out.”\textsuperscript{24} The fire then seeks an escape from the earth and either finds its way out through small openings, or forces its way out: if it has to force its way out it causes destruction and the

\textsuperscript{19} Seneca, \textit{Natural Questions}, 6.6.1.
\textsuperscript{20} Seneca, 6.6.2.
\textsuperscript{21} Ibid.
\textsuperscript{22} Seneca, 6.10.1; Aristotle, \textit{De Meteorologica}, 2.7.365b.7-9.
\textsuperscript{23} Aristotle, \textit{Met.}, 2.7.365b.11-13.
\textsuperscript{24} Seneca, 6.9.1.
shaking of the earth.\textsuperscript{25} Aristotle describes Anaxagoras’ theory as ether which gets trapped inside the earth and wants to escape. He describes the earth as equally porous, so the ether can usually escape, but if the pores become clogged with rain water it gets caught and can not be stopped so it moves the earth.\textsuperscript{26}

Democritus of Abdera, along with Leucippus of Miletus, is credited with creating the theory of atomism, in which everything is composed of indivisible units known as atoms (Greek for indivisible). He was active in the middle of the fifth century and, like Thales a century earlier, thought that water was the principle actor in earthquakes. Democritus believed that the inside of the earth was filled with water: during a heavy rainfall the extra water mixing with that water causes the earth to shake.\textsuperscript{27} He also thought that the water rushing from one place to another inside the earth was capable of causing an earthquake.\textsuperscript{28}

Archelaus, who taught natural philosophy at Athens in the fifth century B.C.E., was one of several philosophers who believed that moving air was the cause of earthquakes. He thought that as the wind blew, the air would go into cavities within the earth. As the earth was filled up with air from the wind, the air would grow thicker and thicker, as the wind continued to exert pressure on the air trapped within the earth, that air would be forced out through narrow passageways and as this happened the earth would move.\textsuperscript{29}

\textsuperscript{25} Ibid.
\textsuperscript{26} Aristotle, \textit{Met.}, 2.7.365a.19-22.
\textsuperscript{27} Aristotle, \textit{Met.}, 2.7.365b.1-2.
\textsuperscript{28} Aristotle, \textit{Met.}, 2.7.365b.3-4.
\textsuperscript{29} Seneca, 6.12.1-2.
Archelaus thought that a calm day usually accompanied earthquakes because “the force of air which usually stirs up the winds is retained in the interior of the earth.”

Diogenes of Apollonia, writing in the fifth century, also believed that air was the cause of earthquakes. He thought that the earth was initially supplied with openings for breathing, but the action of rivers and tides created new ones as well. Air will enter these openings and try to find a way out, which may be blocked if a high tide continues to cover these openings. If this happens, “the air is rolled about and, because it is not able to extend straight out, which is natural to it, it stretches upward and lashes apart the earth pressing down upon it.”

Metrodorus of Chios, who wrote in the fourth century, believed that resonating air caused earthquakes. Seneca relates his theory through the example of a person singing into a jar. As he sings into the jar “his voice vibrates and runs through the whole jar and resonates with a kind of quavering. Even though the voice is projected only slightly it none the less travels around and causes a jolting and disturbance in the surrounding jar.” He equates the earth to the jar, because the earth is full of caves which are filled with air. This air, when “other air, as soon as it falls from above, strikes and agitates, the way those empty spaces I just mentioned vibrate when a shout is sent into them.”

Aristotle, student to Plato and teacher to Alexander the Great, examines earthquakes in his *De Meteorologica*. He begins by describing and refuting the theories of Anaxagoras, Anaximenes, and Democritus. Beginning with Anaxagoras’ idea of earth
pores clogged by rain water, Aristotle claims that this theory is “perhaps too primitive to require refutation.”34 He writes that it is “absurd” to believe that the earth rests on the air, and that upward impact could shake the whole thing.35 Besides these complaints he writes that Anaxagoraras does not even try to account for the attendant circumstances of season and location.36 Aristotle does not ridicule the water based earthquake theory of Democritus, he just describes it. He describes the theory of Anaximenes, where the earth collapses due to drought or heavy rain, but rejects this because if it were the case “the earth ought to be found sinking in many places.”37 He also criticizes Anaximenes for not taking into account the fact that earthquakes happen in places “which are not excessively subject to drought or rain.”38 Aristotle examines these theories in order to set the stage for his own theory.

Aristotle writes that wind is the cause of earthquakes because it is the body which “naturally moves farthest and is most violent.”39 He bases this idea on his theory that the sun heating the earth will produce not one, but two types of evaporation. The evaporation that rises from the moisture which is trapped in the earth is “vapor, while that rising from the earth itself, which is dry, is like smoke.”40 This smoke-like evaporation is essentially a wind. He goes on to say that the dry evaporation which is warm will rise above the moist vapor because it is heavier.41 According to Aristotle an earthquake is

34 Aristotle, Met., 2.7.365a.25.
35 Aristotle, Met., 2.7.365a.33-35.
36 Aristotle, Met., 2.7.265a.33-34.
37 Aristotle, Met., 2.7.365b.12-15.
39 Aristotle, Met., 2.8.365a.31-32.
40 Aristotle, Met., 1.4.341b.8-11.
41 Ibid.
caused when the sun and its own internal temperature heat the earth as well as the
moisture trapped within it and cause wind both inside and outside.\textsuperscript{42} When this great
mass of wind flows inward or outward it causes an earthquake.\textsuperscript{43}

Aristotle also examines the circumstances surrounding earthquakes. Due to the great
mass of air flowing in one direction into the inside of the earth, he argues that most
earthquakes are “accompanied by calm.”\textsuperscript{44} The rare occurrence of an earthquake on a
windy day does not present a problem because it is possible that more than one wind was
blowing initially and only one of them went into the earth.\textsuperscript{45} Fortunately these
earthquakes “are less severe because their source and cause are divided.”\textsuperscript{46} He clarifies
that the most severe earthquakes occur at night or at noon, because those are generally the
calмest times.\textsuperscript{47} The sun is highest at noon and so the evaporation is shut inside the
earth, and when it is night the “absence of the sun makes the evaporation return into the
earth.”\textsuperscript{48} Spring and autumn have the highest incidence of earthquakes of the seasons and
times of extreme wet or drought are also more liable for earthquakes.\textsuperscript{49} He also notes that
the most destructive earthquakes take place in locations like the Hellespont, Achaea, and
Sicily where the “sea is full of currents or the earth is spongy and cavernous.”\textsuperscript{50} He
elaborates that the “spongy” countries are more prone to earthquakes because they have

\textsuperscript{42} Aristotle, \textit{Met.}, 2.8.365b.1-366a.10.
\textsuperscript{43} Ibid.
\textsuperscript{44} Aristotle, \textit{Met.}, 2.8.366b.8.
\textsuperscript{45} Aristotle, \textit{Met.}, 2.8.366a.9-12.
\textsuperscript{47} Aristotle, \textit{Met.}, 2.8.366a.14-366b.1.
\textsuperscript{48} Aristotle, \textit{Met.}, 2.8.366b.1-20.
\textsuperscript{49} Aristotle, \textit{Met.}, 2.8.366b.
\textsuperscript{50} Aristotle, \textit{Met.}, 2.8.366b.25-28.
extra room in the earth for lots of wind.\textsuperscript{51} Aristotle sought to reconcile his theory with observations of the attendant circumstances surrounding previous earthquakes.

He pinpointed earthquakes which he believed were well known in order to prove his theory. He explains that earthquakes will sometimes continue “until the wind that caused it burst through the earth into the air…”\textsuperscript{52} Aristotle points out that this exact thing happened at Heracleia in Pontus in the recent past.\textsuperscript{53} An even more graphic example happened on the Aeolian island of Hiera where “a portion of the earth swelled up and a lump like a mound rose with a noise: finally it burst, and a great wind came out of it and threw up live cinders and ashes which buried the neighboring town of Lipara and reached some of the towns in Italy.”\textsuperscript{54} Aristotle also points to the towns of “Sipylus and the Phlegraean plain and the district in Liguria” which were devastated by a certain type of earthquake which he classifies as “throbbing.”\textsuperscript{55}

This classifying of different types of earthquakes is a final way in which Aristotle demonstrates the meticulousness of his theory. He remarks that severe earthquakes will not end right away, but will often continue for up to forty days because there is a great quantity of wind and the interior shape of the earth prohibits its exit.\textsuperscript{56} He also accounts for the connection between earthquakes and tidal waves. He asserts that this is due to winds blowing from opposite directions: “the wind which is shaking the earth does not entirely succeed in driving off the sea which another wind is bringing on, but pushes it

\textsuperscript{51} Aristotle, \textit{Met.}, 2.8.366b.35.
\textsuperscript{52} Aristotle, \textit{Met.}, 2.8.366b.31-33.
\textsuperscript{53} Aristotle, \textit{Met.}, 2.8.367a.1.
\textsuperscript{54} Aristotle, \textit{Met.}, 2.8.367a.2-7.
\textsuperscript{55} Aristotle, \textit{Met.}, 2.8.368b.30-32.
\textsuperscript{56} Aristotle, \textit{Met.}, 2.8.367b.32-368a.4
back and heaps it up in a great mass in one place.”\(^{57}\) He also classifies the types of earthquakes by their movement and destruction in his book *De Mundo*. He differentiates between “horizontal earthquakes,” “heaving earthquakes,” “gaping earthquakes,” “rending earthquakes,” “thrusting earthquakes,” “vibrating earthquakes,” and “bellowing earthquakes.”\(^{58}\)

Aristotle’s earthquake theory is the most complete of any that have survived from antiquity. He did not stop with theorizing, but tried to link his theory to recent and famous earthquakes. He took into account circumstances that were believed to surround earthquakes, and placed their occurrence to specific seasons, weather conditions, geography, and even times of day. He showed the truth of his theory by highlighting examples of earthquakes that seemed to prove his theory. He also explained different phenomena associated with earthquakes, like aftershocks and tsunamis, and categorized earthquakes by movement and damage. The detailed examination of earthquakes by Aristotle (which we now know to be wrong) gave his theory a great amount of influence. According to Erhard Oeser, no new theories on earthquake mechanics were developed from the time of Aristotle through early modern times: “The authority of Aristotle was so strong that all ideas on the causes and mechanisms of earthquakes were just comments on the opinions of Aristotle, which were repeated almost literally.”\(^{59}\)

Greek philosophers who followed Aristotle expanded on his theory or certain aspects of his theory. Theophrastus, the head of the Peripatetic school after Aristotle, is


\[^{58}\] Aristotle, *De Mundo*, 4.395b.36-396a.12.

identified by Seneca as having helped develop Aristotle’s theory. Theophrastus’ successor at the Lyceum, Strato of Lampsacus “especially cultivated this branch of philosophy and was an investigator of the nature of the universe.” Strato posited that it was the opposition of hot and cold air which caused earthquakes. The hot and cold air cannot exist together, so “cold flows into the place from which the force of heat has departed, and in turn heat exists in the place from which cold has been driven out.” This forcible movement of hot and cold air causes the earth to shake. Epicurus, writing in the late fourth and early third centuries B.C.E., indicates that there could be multiple causes to earthquakes. He “criticizes those who insist that some single one of them is the cause, since it is difficult to promise anything certain about theories which are based on conjecture.” Finally, Posidonius, who taught at Rhodes in the second and first century B.C.E. and was acquainted with some of the leading figures in the late Roman Republic, tried to categorize the types of earthquakes: one is a ‘jolt underneath,’ when the earth is shaken by a jolt and moves up and down. The other is a ‘tilt,’ when the earth leans to one side or the other like a ship.

Roman Attitudes

*Traditional Roman Scientific Attitudes*

Rome’s contribution to scientific explanations for earthquakes does not go much further than preserving the Greek theories. Seneca, a Roman writing in the first century C.E., provides the best account of Greek philosophical earthquake theories. Pliny the
Elder’s *Natural History* and Lucretius’ *On the Nature of Things* also recapitulate the Greek philosophers’ ideas on the mechanics of earthquakes. Pliny and Lucretius explain the prevailing earthquake theories, but do not mention the authors. The chapter on earthquakes in Seneca’s *Natural Questions* is the most complete because he (mostly) credits by name the philosophers who developed these theories. He does mention some ideas without acknowledging the creator, but he is typically careful to recognize the philosopher. The Romans embraced the scientific drive of the Greeks and added their concepts to Roman understanding of the workings of the world.

*Traditional Roman Religious Attitudes*

While educated Romans in the early empire, those who read Pliny, Lucretius and Seneca, understood the importance of Greek scientific contributions to viewing the natural world, Roman religious belief concerning earthquakes stretched back into the days of the Republic. Earthquakes were considered prodigies: prodigies were “for the most part what we would call natural events and there are relatively few that seem miraculous or supernatural in our terms; mostly they appear to have been events which defied Roman conceptions of normality.” A prodigy could be a natural event, but it could also be extremely unnatural: Livy’s prodigy list from 461B.C.E. consisted of fires in the sky, an earthquake, a verified talking cow (as opposed to the talking cow the year before which no one believed), and a rain of meat. Livy provides prodigy lists for many

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66 At 6.7.1 he writes “some other writers also attribute earthquakes to water but with different explanations...” and then gives Democritus’ theory, cf. Aristotle, *Met.*2.7.365b.1-4; At. 6.10.1 Seneca explains that “some” have different reasons for believing that fire is the cause of earthquakes.
68 Livy, 3.10.
years, and subsequent writers chose to record Livy’s lists, occasionally the prodigy lists survive even where his text does not.\textsuperscript{69} Prodigies were an important part of Republican religion. A prodigy was not an act performed by a god or goddess in the human realm rather it was a (un)natural event that gave “an implication that something relating to the gods had gone seriously wrong.”\textsuperscript{70}

Every unusual occurrence was not necessarily a prodigy; the occurrence needed to be reported to the Senate and they made a decision regarding its status as a prodigy. Prodigies were of primary importance to the Senate. They discussed prodigies ahead of other matters of state and questions of war and peace.\textsuperscript{71} Prodigies were viewed with particular importance prior to or during political events. If the senate accepted the sign as a prodigy they were admitting that this event indicated a breach of the \textit{pax deorum}. The prodigy showed that the relationship between the gods and the Romans had been disrupted. Earthquakes were often unusual and disturbing enough, even if not destructive, to warrant a report to the Senate to determine their status as a prodigy. If the Senate declared an earthquake a prodigy it was now considered a matter which concerned the Republic. A prodigy did not necessarily mean that something terrible was going to happen (as if an earthquake were not bad enough!): “The signs were not taken to indicate fated or irreversible processes; nor were they taken as the opportunity for formal divination of the gods’ will…”\textsuperscript{72} The prodigy meant that the gods were unhappy and the people and government needed to take action to restore the divine harmony. The senate

\textsuperscript{70} Beard et al., \textit{Religions}, 37.
\textsuperscript{71} Livy, 24.11.1.
\textsuperscript{72} Beard et. al., \textit{Religions}, 37.
then decided which type of expiatory rite needed to be conducted. An expiatory rite could be performed by the “pontifices”, the quindecemviri sacris faciundis, who on the order of the Senate consulted the Sibyline Books and the Etruscan haruspices.

Thus a prodigy informed the Roman people and the Roman Senate that there had been a disturbance in the pax deorum. The Republic through the Senate’s actions tried to correct this disturbance. “The Roman prodigy in its hey-day undoubtedly answered to a variety of collective psychological, social, and political needs.” The act of expiating the prodigy was important to the Roman Republic: it gave the populace peace of mind that the Senate was concerned with the pax deorum, and it gave the Senate and the religious authorities the role of preserving the harmony between the Roman people and the gods. It helped the senate “acknowledge the anxieties and identify with the religious sensibilities of Italians, particularly at times of severe stress upon the whole fabric of the confederacy.” The expiation of prodigies occurring outside of Rome by the Roman authorities also “could assert Roman hegemony over Italy in the religious sphere parallel to its assertion of hegemony in the temporal sphere.”

By the late Republic and the use of prodigy expiation seems to have fallen into disfavor. Livy laments the neglect of prodigies during his time (the reign of Augustus):

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73 Pontifices were the most eminent priestly college in Rome responsible for overseeing the religious life of the city.
74 Quindecemviri sacris faciundis were the group responsible for interpretation of the Sibyline Books. Originally only two members, the group had 15 from the time of Sulla onward. Brills New Pauly, decemviri.
75 Haruspices were diviners of animal entrails and liver, the best were usually Etruscan.
76 Brills New Pauly, Prodigium.
77 Bruce MacBain, Prodigy and Expiation: A Study in Religion and Politics in Republican Rome, (Brussels: Latomus, 1982), 81.
78 Macbain, Prodigy, 7.
79 Ibid.
“I am quite aware that the spirit of indifference which in these days makes men in general refuse to believe that the gods warn us through portents, also prevents any portents whatever from being either made public or recorded in the annals.”

Public prodigies in the first century B.C.E. are decreasingly reported from the 90’s through the 60’s with a slight increase for the 50’s and 40’s and then extremely infrequently through the rest of the century.

The recognition of prodigies continued to decline throughout the imperial period. Each emperor had a vested interest in downplaying the role of prodigies because any break in the *pax deorum* could be attributed to his rule. The education of the elite in Greek philosophy and the epitomization of natural history by authors like Seneca, Lucretius, and Pliny advanced rational beliefs and marginalized religious beliefs, at least among the educated. The combination of imperial disapproval of prodigies and the dissemination of natural scientific theories helped suppress the reporting and expiation of prodigies during the principate.

Popular traditional belief in prodigies did not necessarily evaporate just because the emperors no longer wanted them accepted. Even educated senatorial elites acknowledged popular religious notions, even if they did not seem to truly believe in them.

While the emperors downplayed the existence of prodigies, many of the elite still valued the religious beliefs for their institutional significance and their value to the

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80 Livy, 43.13.1.
Roman people. Unusual events could still arouse the traditional Roman religious beliefs that had been instilled in them for centuries. G.D. Williams argues that Seneca’s chapter on earthquakes in *Natural Questions* and Lucretius’ section on earthquakes in *On the Nature of Things* “share the goal of alleviating fear of earthquakes and other marvels of nature by offering a rational explanation of their cause(s).” He goes on to say that the offering of rational explanations not only alleviated fear of earthquakes but also quelled religious feelings that had arisen due to the natural disaster. The knowledge of scientific explanations did not necessarily obviate the religious beliefs that had formed a part of the Roman mentality since at least the middle Republic. Scientific and religious attitudes existed at the same time. The scientific explanations sufficed in ordinary times, but in extraordinary times, such as following the Pompeii earthquake in 62 C.E., the religious beliefs showed that they were not far beneath the surface.

As Augustus and his successors transformed the Republic into the Empire the notion of earthquakes signifying a deterioration of the *pax deorum* was transformed from prodigy to omen. An omen usually had less to do with the entire Roman people and related instead to certain important figures, particularly the emperor in the Imperial period. Omens were often reported on the assumption of power by a new emperor, or the death of an emperor: omens of Gaius Caligula’s murder included a laughing statue of Olympian Jupiter, lightning strikes at Capua and at Rome, and bad dreams for Gaius himself. Nero’s impending death was foretold by lightning and earth tremors (aside

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84 Ibid.
from the revolting armies). Earthquakes and other events that might have signaled a disharmony between Romans and their gods now foretold of inauspicious passages in the lives of important people and emperors.

*Roman Christian Scientific Attitudes*

As the Roman Empire shifted from a mainly pagan to a mainly Christian empire in the fourth and fifth century, the rational attitude towards earthquakes and natural phenomenon diminished until it almost disappeared. Throughout antiquity, attitudes toward earthquakes and other natural phenomena had existed in a continuum: from wholly supernatural to completely rational. In late antiquity a variety of forces worked together to nearly erase the scientific end of the spectrum. Ramsay MacMullen argues that the “radical expansion of the upper ranks of society produced an equally radical development in the history of thought.” This expansion diluted elite society so that “habits of mind discoverable in Pliny’s day…were overwhelmed and lost among others quite different, more ‘popular.’” Another blow to the scientific ideals in use since the sixth century B.C.E. was the “increasing limitations on the availability of the system of education that had been shared for centuries by nearly all members of the elite.” Education was becoming an “ecclesiastical preserve” and others who were educated “were likely to get their education from the Scriptures or from Christian texts.”

Education retreated from classical authors, including Greek philosophers and those who

87 Ramsay MacMullen, *Christianity and Paganism in the Fourth through the Eighth Centuries*, (New Haven; London: Yale University Press, 1999), 84.
88 Ibid.
90 Ibid.
followed them, and focused mainly on religious texts that stressed God as the creator of all things.

*Roman Christian Religious Attitudes*

Christians tended to see earthquakes as manifestations of God’s anger with humanity. John Malalas, who covered natural disasters and earthquakes extensively in his *Chronographia*, most often called earthquakes “The wrath of God.” Thus the great Antioch earthquake of 526 is that city’s “fifth calamity from the wrath of God,”91 and through it, God showed the Antiochenes “how populous, splendid, affluent and lavish their city had been.”92 Even after the devastation of the entire city and the destruction of 250,000 lives, God showed His benevolent involvement by punishing those peasants who had robbed, beaten and murdered some of the survivors of the earthquake.93 As the majority of subjects converted to Christianity, and the educated learned from Christian texts, the overriding attitude towards earthquakes was that they were directly caused by their angry God.

*Co-Existence*

Even during the wholesale transformation into a Christian empire and the dilution of elite society, the rational theories of the Greeks, and the pagan religious notions held on. The last compendium of rational explanations for earthquakes comes from the pagan historian Ammianus Marcellinus. His digression in book 17 of his *History* shows a respect for the pagan tradition of Roman prodigies as well as knowledge of the ancient

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91 Malalas, 419.
93 Malalas, 420
philosophical tradition. Following an earthquake in Nicomedia, Bithynia Ammianus writes:

…the time has come to say a few words about the theories which the men of old have brought together about earthquakes…Hence in the books of ritual and in those which are in conformity with the pontifical priesthood, nothing is said about the god that causes earthquakes, and this with due caution, for fear that by naming one deity instead of another, since it is not clear which of them thus shakes the earth, impieties may be perpetrated. Now earthquakes take place (as the theories state, and among them Aristotle is perplexed and troubled) either in the tiny recesses of the earth… under the excessive pressure of surging waters; or at any rate (as Anaxagoras asserts) through the force of the winds… Anaximander says that when the earth dries up after excessive summer drought, or after soaking rainstorms, great clefts open, through which the upper air enters with excessive violence; and the earth, shaken by the mighty draft of air through these, is stirred from its very foundations. Accordingly such terrible disasters happen either in seasons of stifling heat or after excessive precipitation of water from heaven.94

He notes Aristotle’s, Anaximander’s and Anaxagoras’ theory and gives his own classification of earthquakes. Ammianus’ history, which has a decidedly anti-Christian bias, shows that the Greek scientific and Roman-pagan religious ideas on earthquakes existed alongside the prevailing Christian interpretation. These ideas on earthquakes still coexisted in the later empire, even though the Christian attitude would be the dominant one for the next millennium and a half.

94 Ammianus Marcellinus, 17.7.9.
CHAPTER 3: FOUR EARTHQUAKES

This chapter will examine four seismic events: a powerful earthquake that shook the province of Asia in 17 C.E.; two that affected Pompeii, one in 62 C.E. and one that immediately preceded the eruption of Mt. Vesuvius in 79 C.E.; and finally one that destroyed Antioch in the province of Syria in 526 C.E. Each of these earthquakes is well attested in the ancient literature and in the epigraphic record. A detailed look at these events shows many of the popular and imperial responses to earthquakes in the Roman imperial period.

Asia Minor 17 C.E.

An extremely destructive earthquake struck the Roman province of Asia in 17 C.E. This quake rattled a large swath of the province from Cyme and Myrina on the Aegean coast to Sardis and Philadelphia nearly 100 miles away. Pliny called it “the greatest earthquake in human memory.”95 According to Tacitus, “twelve famous cities in the province of Asia were overwhelmed by an earthquake.”96 He mentions Sardis, Magnesia-by-Sipylus, Temnus, Philadelphia, Aegeae, Apollonis, Mostene, Hierocaesarea, Myrina, Cyme, and Tmolus.97 While Tacitus was not present during the earthquake he says that the destruction was greater than it might have been because the earthquake struck during the middle of the night, catching people asleep at home.98 For a culture that spent a great deal of time during the day out in public spaces this could have affected casualty rates. He then contradicts this interpretation by saying that “open

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95 Pliny, *Natural History*, 2.200
96 Tacitus, *Annals*, 2.47.
97 Ibid.
98 Ibid.
ground—the usual refuge on such occasions—afforded no escape, because the earth parted
and swallowed the fugitives.”

This is a good description of surface faulting, where the
fault that causes the earthquake reaches the surface of the earth. Tacitus also writes about
the other fantastic effects of this earthquake: “There are stories of big mountains
subsiding, of flat ground rising high in the air, of conflagrations burning out among the
debris.” The violence of this earthquake was widespread, and Tacitus’ account of the
destruction is relatively detailed. The full scope of the disaster is illustrated when the
sources discuss the massive imperial efforts to relieve the cities and citizens affected by
this event.

A great portion of the Asian province was affected by this earthquake and the imperial
government under Tiberius went to great lengths to help the province. Suetonius, after
relating Tiberius’ cruelty and depravity emphasizes his stinginess, but remarks that “the
only free money grant any province got from him was when an earthquake destroyed
some cities in Asia Minor.” Tacitus shows that this respite from miserliness was
actually very generous:

Sardis suffered worst and attracted most sympathy. Tiberius promised it ten
million sesterces and remitted all taxation by the Treasury or its imperially
controlled branches for five years. Magnesia-on-Sipylus came next in damage
and compensation. Exemptions from direct taxation were also authorized for Temnus, Philadelphia,
Aegaeae, Apollonis, Mostene, Hierocaesarea, Myrina, Cyme and Tmolus.
Strabo writes that Tiberius “generously contributed to the restoration” of these cities.\footnote{103 Strabo, \textit{Geography}, 13.4.8.} Whether or not it was one of very few generous acts on the part of Tiberius, he donated money and remitted taxes for a large number of cities in the province of Asia.

Tiberius did not stop at financial aid for these beleaguered cities, he also sent a former praetor, Marcus Ateius, to “assess the situation on the spot and administer relief.”\footnote{104 Tacitus, 2.47.} Dio Cassius describes Ateius as “a man of consular rank with five \textit{lictors}.”\footnote{105 Dio Cassius, 57.17.7} This man would have been in charge of distributing money, acquiring building materials, finding construction workers, and directing the rebuilding process. By sending an agent, Tiberius hoped to ensure that his enormous outlay of money was spent wisely and the tax money that was not coming to the treasury was also used properly. Tiberius also wanted to ensure that his contributions were kept in mind. He did not want his \textit{euergetism} to be forgotten.

Tiberius did not need to fear his actions being forgotten. Apart from being remembered by Tacitus, Strabo, Pliny the Elder, Suetonius, Dio Cassius, and Apollonius Grammaticus in the literature, there were several attempts to commemorate his disaster relief. The cities to which he granted tax exemptions and offered aid money dedicated to Tiberius a monument which was found at Pozzuoli, near modern Naples in 1693.\footnote{106 Guidoboni et al., \textit{Catalogue}, 183.} This rectangular monument, dated to 30 C.E. had representations of the cities affected by the earthquake and the aid of Tiberius.\footnote{107 Ibid.} The Latin inscription reads:
To Tiberius Caesar Augustus, son of the emperor Augustus, nephew of the emperor Julius, pontifex maximus, consul for the fourth time, emperor for the eighth time, granted tribunicii power for the thirty-second time, the Augustales. The city authority restored [...] Sardis [...], [Magnes]ia, Philadelphia, Tmolus, Cyme, Temnus, Cibyra, Myrina, Ephesus, Apollonidea, Hyrca[nia], Mostene [Aeg]ae and [Hierœ]aesarea.  

There are other similar inscriptions which were found in the ruins of Mostene and in Nemrud Kalesi, Turkey which is the site of ancient Aegae. Along with the monuments and inscriptions which have been found, Apollonius Grammaticus writes that the cities Tiberius helped “built and dedicated to him a colossal statue next to the Temple of Venus in the Roman Forum, and each of the cities subsequently put up statues.” Tiberius’ role was also memorialized on coins which describe him as “Civitatibus Asiae Restitutis” or rebuilder of cities of Asia.

The devastating earthquake of 17 C.E. is well attested in the ancient sources. Tacitus gives the most detailed account, but his description of the earthquake itself is relatively general. He notes an additional destructive aspect associated with earthquakes: the outbreak of fire. This earthquake showcases many of the reactions that Roman emperors had following earthquakes: Tiberius bestowed generous grants of rebuilding money, exempted the cities from taxation, and sent a commissioner with proconsular power to oversee the reconstruction.

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108 CIL 10.1624. All inscription translations from Guidoboni et al., Catalogue. For the addition of Ephesus and Cibyra to the list of cities in Tacitus, see Guidoboni et al., Catalogue, 184.
109 Guidoboni et al., Catalogue, 185.
110 FGrHist 257 F 36(XIII).
111 British Museum, K90535 D-36 D.
Pompeii 62 C.E.

Pompeii is most famous for the eruption of Mt. Vesuvius in 79 C.E. which buried the city under a layer of volcanic ash. In the year 62 C.E. there was another geologic event which severely damaged Pompeii and other towns in Campania. This earthquake left considerable damage to buildings which were in various stages of reconstruction when the eruption of Vesuvius blanketed them with ash and preserved them. The main literary account of this earthquake is from Seneca. He writes that he has heard that Pompeii had “been reduced to ruins by an earthquake, and that the neighboring area has been affected too.”\footnote{Seneca, 6.1.2.} He expands on the damage to the neighboring area:

Part of Herculaneum is also in ruins, and what is left is in danger of collapse; and although Nocera escaped destruction, it is not without its problems. Naples also suffered slight damage: many private houses were lost, but not public buildings. Some villas did collapse, but in many places the tremors caused no damage.\footnote{Seneca, 6.1.2-3.}

Seneca notes that Campania is “never safe from such dangers, but has not suffered badly in the past, getting off with a fright on many occasions.”\footnote{Ibid.} Tacitus also reports on this earthquake, but tersely writes: “An earthquake also largely demolished the populous Campanian town of Pompeii.”\footnote{Tacitus, Annals, 15.22.}

Seneca also describes some particular events from this earthquake which he must have learned from eyewitnesses. Along with noting the damage to cities and houses he reports that “a flock of hundreds of sheep was killed, statues were split open, and some people
were so deranged by what had happened that they wandered aimlessly around.\textsuperscript{116} Interestingly he does not assert whether there were any human casualties but does mention the destruction of a flock of sheep. Seneca goes on to explain that the sheep were not killed by fear, but died due to breathing poisonous gases.\textsuperscript{117} This shows the probable volcanic nature of this earthquake.\textsuperscript{118} Not only would the death of a large flock of sheep be peculiar, it would most likely have important economic ramifications for the owner. Seneca repeats news he learned from a trusted eyewitness:

\begin{quote}
I also think it worth recording what I learned from a very wise and respected man (he happened to be taking a bath when it happened): he said that while in the bath he saw the floor tiles separate from one another and come back together again, and that when the floor opened up, water was sucked into the joins, only to bubble and squirt out again when it closed back.\textsuperscript{119}
\end{quote}

These peculiar happenings were sufficiently interesting for him to write down, but he seems to change his mind about the noteworthiness of the statue splitting open:

\begin{quote}
A great deal has been said about the extraordinary effects of these earth tremors, and the amazing sights they produce. Why, then, should anyone be surprised if a single bronze statue, which is not solid but hollow and thin, should split, when there may have been some air inside seeking a way out...So if an earthquake cracks whole walls and houses, and splits the sides of great towers, however solid they may be...what is so special about a statue being split from top to bottom into two equal halves.\textsuperscript{120}
\end{quote}

G.D. Williams argues that Seneca was showing the foolhardiness of attributing divine or religious interpretations to something that can be explained rationally. As a believer in Stoic philosophy he was dismayed to see the undercurrent of religious trepidation that

\begin{footnotes}
\item[116] Seneca, 6.1.3.
\item[117] Ibid.
\item[119] Seneca, 6.31.3.
\item[120] Seneca, 6.30.4-5.
\end{footnotes}
accompanied the earthquake. He reasserted rational explanations for earthquakes and simply explained some phenomena that others had given supernatural importance.121

Seneca also relates some bits of information about the damage to buildings in Pompeii, which is interesting since many of those buildings remain in their damaged or repaired state due to the Vesuvius eruption of 79 C.E. He writes that they had seen “the corners of buildings split open and then move back into place.”122 Some buildings, built by “negligent or slovenly builders,” actually benefited from the earthquake because the repeated shaking caused them to become firmer in their foundations.123 His respected eyewitness also saw “earthen walls vibrating more sinuously and rhythmically than the nature of a hard substance permits.”124 The descriptions found in Seneca’s work match with the archaeological record that was preserved by the eruption of Mt. Vesuvius. The earthquake in 62 completely destroyed some Pompeian buildings but many of them were only damaged and remained standing. The description of walls vibrating rhythmically and buildings being shaken into their foundations matches with the archaeological evidence that shows buildings receiving severe structural damage, but not being completely destroyed.

Seneca’s text describes the earthquake of 62 and the damage to buildings. Archaeological evidence also illustrates reconstruction techniques and timetables when there was little imperial assistance. This paper will examine the archaeological evidence in a later section on rebuilding.

121 G.D. Williams, “Greco-Roman Seismology,” 124-146.
122 Ibid.
123 Ibid.
124 Seneca, 6.31.3.
Pompeii 79 C.E.

Pompeii is one of the most famous archaeological sites from antiquity because it was preserved under layers of ash by the eruption of Mt. Vesuvius in 79 C.E. That eruption is also famous because Pliny the Younger wrote vivid eyewitness accounts of the disaster. He recounts the last hours of his uncle, the Elder Pliny, who died at Stabiae while investigating the eruption, and helping those in need. His second letter to Tacitus shows the physical actions of the eruption and the accompanying seismic disturbances, as well as the human reaction: his own and that of others. Dio Cassius, although writing in the 3rd century C.E., also wrote an interesting account of the eruptions and earthquakes of 79 C.E.

Pliny’s story begins by stating that Campania was prone to earthquakes, but these seemed different. He writes that there had been tremors for the past several days “which were not particularly alarming because they are frequent in Campania.” His uncle had gone to investigate, but the younger Pliny was so accustomed to the tremors that he had stayed behind to study, bathe, and eat, his normal daily routine. He slept “fitfully” as he felt the power of these tremors: “that night the shocks were so violent that everything felt as if it were not only shaken but overturned.” His mother came into wake him up, just as he was getting ready to go wake her. Even at this point, Pliny felt that these tremors were bigger than normal, but not catastrophic, and he continued to read a volume of Livy. Finally, once he realized that the open space where they sat was small, and the buildings were on the verge of collapse, they decided to leave town. Pliny admits he was either
brave or foolhardy to have waited as long as he had, but the fact was that seismic activity
was a relatively standard part of life in Campania.\textsuperscript{125}

Once the decision had been made to escape, Pliny juxtaposes his own calm
indifference to the tremors with the actions of others fleeing for their lives. He notes that
they were followed by a “panic-stricken mob.” Pliny states that the people followed him
and his family because they were so fearful that they did not want to make their own
decisions. This shows some conceit on the part of Pliny, as it would probably have taken
a while to form an entire “panic-stricken mob” but the one that followed him seemed to
already be out in the streets. Pliny asserts that he and his mother continued to act
heroically waiting for the elder Pliny to arrive, refusing to leave without knowing
whether he was safe, while friends “rushed off and hurried out of danger.” He and his
mother argued with each other about which one should stay behind in order for the other
to save themselves, and they finally agreed to escape together, and Pliny “grasping her
hand forced her to quicken her pace.” They finally left the road in order to avoid being
trampled by the panicked masses and even as they were lightly covered in ash Pliny
“could boast that not a groan or cry of fear escaped me in these perils.” The following
night and day they waited for news of his Uncle Pliny, and even as the earthquakes
continued they waited for information.\textsuperscript{126}

Pliny’s and his mother’s composed stroll away from danger was made less pleasant by
the terrified mob that initially followed their lead, and then threatened to trample them on
the road. As fearful as Pliny was relaxed, the masses screamed and ran hysterically:

\textsuperscript{125} Pliny, Letters, 6.20.
\textsuperscript{126} Ibid.
You could hear the shrieks of women, the wailing of infants, and the shouting of men; some were calling their parents, others their children or wives, trying to recognize them by their voices. People bewailed their own fate or that of their relatives, and there were some who prayed for death in their terror of dying. Many besought the aid of the gods, but still more imagined there were no gods left and that the universe was plunged into eternal darkness for evermore.\textsuperscript{127}

Even once daylight returned and the survivors were able to assess some damage they remained frightened, some frenzied. “Fear predominated, for the earthquakes went on, and several hysterical individuals made their own and other people’s calamities seem ludicrous in comparison with their frightful predictions.”\textsuperscript{128} Pliny heard screams and cries and prayers, a completely understandable reaction in the midst of a catastrophic natural disaster. Contrasting his own cool with the panic of the “mob” seems to be a rhetorical device to build up his own image. Pliny illustrates the instinctive behavior of many people in the middle of an earthquake. Dio Cassius reiterates the panic and desire to escape during the eruption:

“…others believed that the whole universe was being resolved into chaos and fire. Therefore they fled, some from the houses into the streets, others from outside into the houses, now from the sea to the land and now from the land to the sea; for in their excitement they regarded any place where they were not as safer than where they were.”\textsuperscript{129}

The sudden and violent disruption of everyday reality, when the ground is no longer solid beneath your feet, causes fear and panic.

While fleeing from his house Pliny noticed strange occurrences, and the physical and geological manifestations of this massive seismic event. The first “extraordinary experience which thoroughly alarmed” Pliny had to do with the carriages he had ordered

\textsuperscript{127} Ibid.
\textsuperscript{128} Ibid.
\textsuperscript{129} Dio Cassius, 66.21. 1-24.
to convey his group. “The carriages…began to run in different directions though the
ground was quite level, and would not remain stationary even when wedged with
stones.” The next sight was even more extraordinary: “We also saw the sea sucked
away and apparently forced back by the earthquake: at any rate it receded from the shore
so that quantities of sea creatures were left stranded on dry sand.” Seismic
disturbances create situations which defy rational belief, and these peculiar events tend to
be remarked on by eyewitnesses.

The eruption of Mt. Vesuvius completely buried Pompeii and Herculaneum and
devastated other Campanian cities. The emperor, Titus, offered help. Pliny’s account,
focusing on the events surrounding the eruption itself, makes no mention of imperial aid,
but Dio Cassius makes a passing remark and Suetonius describes Titus’ concern.
Suetonius groups the eruption of Vesuvius with other disasters in the empire: “Titus’
reign was marked by a series of dreadful catastrophes – an eruption of Mount Vesuvius in
Campania, a fire at Rome…and one of the worst outbreaks of plague that had ever been
known.” He goes on to say that Titus showed sincere concern for the victims of these
disasters: “Throughout…he showed far more than an Emperor’s concern: it resembled
the deep love of a father for his children, which he conveyed not only in a series of
comforting edicts but by helping the victims to the utmost of his purse.” Like Tiberius,
he sent an imperial commission to help with the humanitarian disaster and the efforts of

130 Pliny, Letters, 6.20.
131 Ibid.
132 Suetonius, Titus, 8.
133 Ibid.
rebuilding. He also “devoted the property of those who had died in the eruption and left no heirs to a fund for rebuilding the stricken cities.”135 Dio Cassius, while discussing a later fire in Rome, mentions that Titus was not in Rome because he was “absent in Campania attending to the catastrophe which had befallen that region.”136 This remark is interesting because it shows an emperor’s personal presence at the scene of a natural disaster, which is rarely mentioned in the literary sources.137

The descriptions of the seismic disturbances that culminated with the eruption of Mt. Vesuvius in 79 C.E. offer insight into several reactions both popular and imperial. Pliny’s self-described heroic attitude is one way in which people reacted to intense natural disasters. The actions of the “panic-stricken mob” that succumbed to fear and hysteria are another instinctive behavior of humans in life-threatening situations. Pliny’s eyewitness account of the physical actions of the earth are also important in understanding earthquakes and why people react the way they do. The explanation of Titus’ concern and imperial actions once again illustrates imperial steps that were taken to alleviate suffering following natural disasters.

Antioch 526 C.E.

In the year 526 C.E. the city of Antioch in Syria was devastated by an earthquake followed by a destructive fire. The earthquake destroyed many of the buildings in Antioch, and the fire finished off those that had not collapsed in the earthquake. This earthquake also killed a great deal of the population of Antioch where casualties were

134 Ibid.
135 Ibid.
137 Guidoboni et al., Catalogue, 223.
estimated as high as 300,000 people. The main literary sources for this earthquake are John Malalas, Theophanes, and Georgius Cedrenus, and it is also mentioned by Procopius. The sources pay special attention to the suffering of many of the survivors and their fate in the immediate aftermath of this disaster. Once again the sources note the strange events that took place during this earthquake. The sources describe this earthquake, occurring when the empire was officially Christian, in terms of God’s wrath and punishment for the sins of the city.

The earthquake and subsequent fire destroyed many of Antioch’s buildings. Malalas says that the outcome of this earthquake was that “Antioch became desolate, for nothing remained apart from some buildings beside the mountain.” Procopius adds that Antioch “was struck by an exceedingly violent earthquake, which reduced the whole city to ruins and immediately razed to the ground most buildings, including the finest in the city…” Theophanes writes that the city “was almost entirely destroyed and became a tomb for its inhabitants.” He also reports that “every house and church collapsed and the beauty of the city was destroyed.” Obviously this earthquake and the fire that it sparked caused immense damage to the buildings of Antioch.

With such great structural damage it is no surprise that the death rate was also extremely high. Procopius writes that “it is said that at that time three hundred thousand of the population of Antioch perished.” Malalas explains that the number of people in

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139 Malalas, 4.19.
141 Theophanes, 172.
142 Theophanes, 173.
Antioch was artificially high because “this was the great festival of the Ascension of Christ our God and a great throng of visitors had come to town.”\textsuperscript{144} He estimates the death toll at 250,000.\textsuperscript{145} Cedrenus doesn’t give a total estimate, but writes that “many thousands of men, women and children were piled into great heaps and buried in the ruins.”\textsuperscript{146} The most famous casualty of the earthquake was the bishop of Antioch, Euphrasius.\textsuperscript{147} The death toll was extremely high, but these numbers probably have some exaggeration. While the total population may have been as high as three hundred thousand Liebeschuetz argues that it was probably closer to one hundred fifty thousand.\textsuperscript{148} Nevertheless this earthquake devastated both the architecture and the population of Antioch.

The disarray of a major earthquake followed by an overwhelming fire is captured in Malalas’ description of the event. He writes:

\begin{quote}
The surface of the earth boiled and the foundations of buildings were struck by thunderbolts thrown up by the earthquakes and were burned to ashes by fire, so that even those who fled were met by flames. It was a tremendous and incredible marvel, with fire belching out rain, rain falling from tremendous furnaces, flame dissolving into showers, and showers kindling like flames even those in the earth who were crying out.\textsuperscript{149}
\end{quote}

While Pliny’s description of his harrowing escape from the Vesuvius disaster hints at the confusion experienced in this type of situation, his calmness minimizes the feeling of

\textsuperscript{144} Malalas, 4.20.
\textsuperscript{145,146} Ibid.
\textsuperscript{147} Cedrenus, 641.
\textsuperscript{148} Cedrenus, 640; Theophanes, 172.
\textsuperscript{149} J.H.W.G Liebeschuetz, \textit{Antioch: City and Imperial Administration in the Later Roman Empire}, (Oxford: Clarendon Press, 1972), 96.
\textsuperscript{149} Malalas, 4.19. The fire and thunderbolts bursting from the earth that Malalas and Cedrenus narrate are unexplainable in normal seismic circumstances. Mike Baillie, a dendrochronologist from Queens University, Belfast, offers the explanation that this earthquake may not have been tectonic in nature, but might have been caused by a comet strike or some other extra-terrestrial event. See Mike Baillie, \textit{New Light on the Black Death: The Cosmic Connection}, (Stroud:Tempus, 2006).
crisis. Malalas’ account, on the other hand, shows the terror and chaos of a situation in which there seems to be no escape from many dangers.

While the account of the earthquake and fire is gripping, the stories of the victims and survivors of the disaster are even more captivating. Cedrenus’ description of “heaps” of bodies and the enormous casualty estimates of Procopius and Malalas show the devastation of this catastrophe. Cedrenus writes that “fire issued from the earth, and burned some who had been buried alive.”\textsuperscript{150} Theophanes echoes this when he writes: “Some of those who were buried and still alive beneath the ground were burned by fire that came out of the earth. Another fire came down out of the air like sparks and burned whomever it touched like lightning.”\textsuperscript{151} The portrayal is of intense suffering: as if being buried alive was not painful enough, those victims survived the quake only to be burned alive from a firestorm seemingly erupting from both the earth and sky. Malalas writes that some of those who survived the burial and then escaped being burned were rescued from underground only to die upon reaching the surface.\textsuperscript{152} The troubles did not end even for those who survived: “Some of the citizens who survived gathered whatever of their possessions they could and fled. Peasants attacked them, stole their goods and killed them.”\textsuperscript{153} The suffering of the city of Antioch was severe. A great portion of the population was killed, many apparently in a terrifying and excruciating manner. Those who did survive were attacked and killed as people took advantage of the chaos in order to loot and rob. It was as if the people of Antioch were being punished.

\textsuperscript{150} Cedrenus, 641. For fire, see n. 149 above.
\textsuperscript{151} Theophanes, 172
\textsuperscript{152} Malalas, 420.
\textsuperscript{153} Ibid.
The focus on the suffering of the Antiochenes may have been because the writers believed that God was punishing the city. Malalas, Theophanes, and Cedrenus all refer to this earthquake as the “wrath of God.” The Christian belief in providentialism was very strong and God’s will was seen in many aspects of this disaster. Malalas points out that in the midst of the great destruction: “No holy chapel nor monastery nor any other holy place remained which had not been torn apart.” This seems to suggest that he thinks God was so angry that he did not even spare holy places that would normally have been saved. He even points out that “The great church of Antioch, which had been built by the emperor Constantine the Great, stood for seven days after this tremendous threat from God. Then it too was overcome by fire and razed to the ground.” Even when it seemed that God would spare the most holy place in the city, it was eventually destroyed.

According to Malalas God eventually showed his benevolence. After the city was destroyed and burned to the ground, some of the survivors were robbed by peasants. Apparently man’s inhumanity to man angered God even after he had destroyed most of the city and killed scores of people. “But God’s benevolent chastisement of man was revealed even in this, for all those robbers died violently some by putrefaction, some were blinded and others died under the surgeon’s knife…” God also showed his benevolence in a less vengeful manner:

For pregnant women who had been buried for 20 or even 30 days were brought up from the rubble in good health. Many who gave birth underground beneath

154 Malalas, 419, 420, 421; Theophanes 172; Cedrenus, 640-1.
155 Malalas, 420.
156 Ibid.
rubble, were brought up unharmed with their babies and survived together with the children to whom they had given birth. Equally other children were brought out alive after 30 days.\(^\text{157}\)

The Christian sources attributed the earthquakes to God’s wrath. They focus on the suffering of the victims and even the survivors in order to highlight God’s anger with the population.

The suffering of the Antiochene people did not escape the notice of the emperor Justin. When he found out about the devastating earthquake he was “deeply grieved”\(^\text{158}\) and “afflicted with great sorrow.”\(^\text{159}\) The emperor sought to display his sorrow and humility. “He threw aside his crown and imperial robes, and, dressed in dirty rags, he wept for many days…”\(^\text{160}\) Theophanes repeats the story but notes that he dressed in sackcloth for this period of mourning.\(^\text{161}\) Following this mourning, on a feast day, he went to church and still “refused to wear the crown or the chlamys, but went dressed very plainly in a purple mantle and wept in the presence of the whole Senate.”\(^\text{162}\) His actions influenced the rest of the survivors and “everybody wept and wore mourning like him.”\(^\text{163}\) According to Malalas he also cancelled the games in Byzantium.\(^\text{164}\)

Fortunately for the surviving Antiochenes, the emperor’s reaction did not end with weeping and dressing poorly- he also sent money and men to aid in reconstruction.

Malalas records that:

\(^\text{157}\) Malalas, 421. 
\(^\text{158}\) Cedrenus, 640. 
\(^\text{159}\) Malalas, 421. 
\(^\text{160}\) Cedrenus, 641. 
\(^\text{161}\) Theophanes, 173. Theophanes records two earthquakes, one in 526 and another in 527, which is when describes Justin’s reaction. Guidoboni in Catalogue argues that he has made two earthquakes out of one. 318. 
\(^\text{162}\) Theophanes, 173. 
\(^\text{163}\) Ibid. 
\(^\text{164}\) Malalas, 421.
In that year the emperor sent out the *comes* Carinus with five *centenaria*. With him he also sent Phokas the patrician and Asterios, learned men, giving them much money for reconstruction of the city, its aqueducts and bridges over the river, since he knew the city; for he had lived in it for some time… He wrote frequently to these patricians to take care of the city.165

Justin was concerned with the city and its recreation since he had lived there in the past. Shortly, afterward, Justinian became co-emperor and he also “gave generously to the Antiochenes.”166 Justinian and Theodora both provided money for buildings in Antioch. Justinian built two churches, a hospice, baths and a cistern; Theodora also built two churches.167 Both emperors, Justin and Justinian, were upset with the destruction of the city of Antioch and like Tiberius half a millennium earlier, provided money and oversight for the reconstruction of the city. Unfortunately, only two years later, Antioch would be struck by another devastating earthquake, which would destroy the few buildings which had survived the 526 earthquake, as well as the rebuilt and newly constructed buildings. These disasters hastened the deterioration of Antioch which was then sacked by the Persians in 540.

The earthquake of 526 in Antioch shows both the continuity of imperial earthquake response as well as the changes that accompanied the advent of Christianity. The emperors, Justin and Justinian, both sent money to help with reconstruction. Justin also sent several patricians to oversee excavation and reconstruction of the city. They sent financial assistance to rebuild public works as well as religious buildings—in this case churches rather than temples. The main differences were that the emperor made a show of prayer and mourning and acted with humility after the earthquake. He led the people

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165 Malalas, 422.
166 Ibid.
167 Malalas, 423.
in prayer and dressed in rags in order to propitiate God. God’s anger at humanity’s sins manifested itself as this powerful earthquake.
CHAPTER 4: SURVEY OF POPULAR AND IMPERIAL RESPONSES FROM AUGUSTUS TO JUSTINIAN

Popular Response

The surprise and terror of an earthquake forced people to act in a variety of predictable ways. For those caught in the middle of an earthquake instinct and fear tended to direct their actions and reactions. Following an earthquake people tended to follow their own human nature: some were helpful and generous, others were greedy and predatory. Emperors had a number of ways in which to respond, but the destruction of property and life caused by earthquakes tended to make even the most poorly regarded emperors models of philanthropy. This chapter will survey popular reaction during and following seismic events, and imperial action to help subjects and cities in need.

During an Earthquake

During an earthquake, individuals responded with typical, instinctive human behavior: they feared for their lives and they panicked. An earthquake in Constantinople in 557 struck near midnight: “Everybody was awakened and shrieks and lamentations could be heard, accompanied by the usual pious ejaculations that spring spontaneously to the lips in such moments of crisis.”168 Tacitus, mentioning an earthquake in Rome in 51 C.E., describes how houses fell and “…as fear spread, the weak were trampled to death by the panic-stricken crowd.”169 Pliny the Younger’s letter to Cornelius Tacitus depicts the terror gripping Misenum during the earthquakes which presaged the eruption of Vesuvius in 79 C.E.:

168 Agathias, The Histories, 5.3.4.
169 Tacitus, Annals, 12.43.1
… but that night the shocks were so violent that everything felt as if it were not only shaken but overturned… This finally decided us to leave town. We were followed by a panic-stricken mob of people wanting to act on someone else’s decision in preference to their own (an element in fear which is like prudence), who hurried us on our way by pressing hard behind in a dense crowd… You could hear the shrieks of women, the wailing of infants, and the shouting of men; some were calling their parents, others their children or wives… People bewailed their own fate or that of their relatives, and there were some who prayed for death in their terror of dying.\textsuperscript{170}

The sense of panic precluded even important social mores: “the ordered structure of society with its due observance of decorum and respect for privilege and the proper distinction of rank was thrown into wild confusion and trampled underfoot.”\textsuperscript{171} Slaves disobeyed their masters and “men of authority and men of no consequence were placed on an equal footing owing to the common danger and general prospect of imminent annihilation.”\textsuperscript{172}

While learned social customs might be forgotten in the face of “imminent annihilation” people in antiquity did have some earthquake common sense. People understood that the greatest danger in an earthquake was being struck by a falling object, or crushed by a collapsing structure. The ancient sources repeatedly stress the fact that people ran for whatever open spaces they could during an earthquake. Augustine mentions an earthquake in the city of Sitifis in 419 that was “so violent that everyone stayed out in the open fields for five days.”\textsuperscript{173} Agathias mentions an earthquake in Alexandria in 554 which was unusual because Egypt was rarely seismically active. He says that even there “Nobody stayed indoors. The populace congregated in the

\begin{footnotes}
\footnote{Pliny, \textit{Letters}, 6.20}
\footnote{Agathias, 5.3.8.}
\footnote{Ibid.}
\footnote{Augustine, \textit{Letters}, 19.6.}
\end{footnotes}
streets…” Tacitus reinforces the idea when he remarks that an earthquake which devastated 12 cities in Asia was so violent that “Even the usual resource in these catastrophes of rushing out into the open was unavailing, as the fugitives were swallowed up in yawning chasms.” Tremors and earthquakes were common enough that people knew to try to get out into the open.

In heavily populated cities, fields and open spaces would have been few and far between, so people left their homes and ran for strong public buildings. In the later empire these strong public buildings were often churches that served as places of physical as well as spiritual refuge. Theophanes shows that in the year 343 those who sought shelter in the church for whatever reason made the right choice: “In that year a violent earthquake occurred and Neocaesarea in Pontus was completely destroyed, except for the church and the bishop’s palace and many valorous men were found there.”

Theophanes describes the same outcome during an earthquake in the same place in 502: “When an earthquake was about to occur at Neocaesarea, a soldier who was walking along saw two other soldiers near the city and a person shouted from behind: ‘Protect the house which contains the tomb of Gregory’. When the earthquake struck, most of the city collapsed, except for the church of St. Gregory.” Unfortunately sometimes sheltering in churches and other strong, well built buildings did not work as happened on the island of Cos in the mid-6th century:

Almost all the inhabitants perished indiscriminately, whether they happened to have taken refuge in places of worship or to have stayed in their homes or

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174 Agathias, 2.15.5-7
175 Tacitus, Annals, 2.47.1-4
176 Theophanes, 37.
177 Theophanes, 144.
gathered together in some other spot… A mere handful of houses stood intact, and they were not the ones that had been built with stones and mortar or some such seemingly more solid and durable substance, but only those built in peasant style out of unbaked bricks or mud.\textsuperscript{178}

Pseudo-Joshua the Stylite describes another time when seeking refuge was fruitless, this time north of Nicopolis, Armenia:

Again in the north there was a church called that of Arsamosata, which was very strongly built and beautifully decorated…and all the people fled to the church, to take refuge with the bones of the saints, but while they remained there in great fear, and were praying and worshipping in the middle of the night, the church collapsed and the majority of those inside were crushed beneath it.\textsuperscript{179}

Individuals and groups in the ancient world realized that if they were unable to find open space during an earthquake, the next safest place to be was in a well-built, stone building. In late antiquity, churches were often the physically strongest buildings; and also had the benefit of being spiritual sanctuaries.

Whether or not people ended up in a religious building, they often resorted to prayer during and immediately after earthquakes. Pagans and Christians alike sought aid from the divine. Philostratus gives a glimpse of pagan prayer amid arguing citizens in Antioch in 47 C.E: “But when a violent earthquake occurred, they all cowered in fear and, as is usual in the case of heavenly portents, prayed to one another.”\textsuperscript{180} Pliny’s “panic-stricken mob” not only “shrieked” and “prayed for death” to deliver them from the terror of the disaster, but also “besought the aid of the gods.”\textsuperscript{181} Pagans in the later empire sought the help of the gods; following an earthquake in Aphrodisias in 241“… Cordus says that the Sibyline Books were consulted, and everything that seemed to be required by them was

\textsuperscript{178} Agathias, 2.16.1-6.
\textsuperscript{179} Pseudo Joshua the Stylite, The Chronicle of Joshua the Stylite composed in Syriac, A.D. 507, 261-262.
\textsuperscript{180} Philostratus, Life of Apollonius of Tyana, 6.38.
\textsuperscript{181} Pliny the Younger, Letters, 6.20.
done; whereupon this worldwide scourge was assuaged”. Even though the belief in prodigies had diminished, we still see an expiation in the middle of the third century.

Christians thought that earthquakes were divine punishment for sinful living, but that did not stop them from praying to God during and after earthquakes. Synesius of Cyrene stated this simply: “God often caused tremors to occur by day, and most men, with bowed heads devoted themselves to prayer…” Prayer by the citizens of Constantinople in 447 paid off during a great earthquake: “all fled outside the city chanting litanies day and night…because of the forbearance of the beneficent God…amidst such great peril he did not kill anyone.” During this same earthquake Malalas writes that “The emperor went barefoot in a procession of prayer with the senate, the people and the clergy for many days.” Following an earthquake in Antioch in 528: “Those who remained in the city prayed in their bare feet, weeping and throwing themselves down in the snow and crying ‘Have mercy, O Lord.’” God did eventually have mercy in this disaster: “Then He appeared to a pious man, who told all the survivors to write at the top of their doors: ‘Christ is with us. Stop.’ When this was done, the wrath of God abated.” The aid of a pious man also helped during four months of earthquakes in Constantinople in 437. According to Theophanes, the earthquakes finally stopped after St. Proclus, patriarch of Constantinople, said “Holy God, Almighty God, Immortal God,

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184 *Chronicon Paschale* 284-628 AD, 586.
185 Malalas, 364.
186 Theophanes, 178.
187 Ibid.
have mercy on us.”Unfortunately, as we have already seen with the citizens taking refuge in the church of Arsamosata, prayer did not always work: in the midst of praying and worshipping, the church collapsed, killing most of those praying. Praying for help from a higher power was another instinctive behavior in the traumatic hours and days during and after seismic events.

Along with praying for their own safety, people tried to help others caught in the destruction of an earthquake. An inscription on a stele put up after an earthquake in Nicomedia between 120 and 128 praises a nanny who tried to protect his young charges:

Thraso, son of Diogenes, erected this stele for his two sons, Dexiphanes aged five and Thraso aged four, and for Hermes, aged twenty-five, who was bringing them up. In the ruins caused by the earthquake he was embracing them like this.

The stele shows Hermes futilely covering the young boys with his arms in an attempt to protect them from falling debris. In the last decade of the 5th century a “tremendous” earthquake destroyed Rheidium, a small town west of Constantinople, but “a very large number of those who had been trapped in the rubble were rescued alive.” Malalas reports that after an earthquake in Constantinople in 554, rescuers were able to find survivors alive following days of being trapped in the rubble. The search for victims could even continue for weeks as happened in the Antioch disaster of 526 when women who had given birth while trapped in the rubble for thirty days were rescued with their newborn children. Unfortunately for victims of an earthquake 28 years earlier in

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188 Theophanes, 93.
190 CIG 3293, 3352.
191 Malalas, 489.
192 Malalas, 487.
193 Malalas, 421.
Antioch there was a similar incident with a more heartrending conclusion: “Many of those who had been buried in the earth survived to be brought up alive, but then died.”

Earthquakes caused massive damage and destruction to people and property and an immediate response was to protect and rescue those who needed help.

*After the Earthquake*

After the trembling and destruction of an earthquake ended, what did people do? Did they immediately begin rebuilding their lives? Did they move away from a perceived dangerous location? Did they ask for help from the central government? Were individuals able to take matters into their own hands? Did anyone take advantage of the situation for their own profit? Ancient earthquake survivors did it all. Some survivors had had enough, and simply moved away. Individual or community embassies petitioned the emperor for aid. Individuals of means often repaired or reconstructed buildings that were personally important or important to the community. There is also evidence that people took advantage of the chaos surrounding earthquakes to benefit themselves and cheat others.

Following the physical, psychological and emotional trauma of a destructive earthquake some people moved away from their homes. Following the earthquake in Pompeii in 62, Seneca complained that it was difficult to predict where the next earthquake or other disaster might strike:

> Let us therefore face with courage a disaster which cannot be avoided or foreseen, and stop listening to those who turned their backs on Campania and emigrated after the earthquake, declaring that they would never set foot there again. For

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194 Malalas, 420.
who can promise that they will be on more solid foundations in one place rather than another.195

In this situation those who left may have been wise considering the fact that 17 years later Vesuvius would erupt, destroying Pompeii and Herculaneum and devastating other Campanian locales. The desire to leave a town rocked by an earthquake was strong half a millennium later when Antioch was hit and some of those who survived “fled to nearby cities or into the mountains, where they lived in hovels.”196 Physical destruction could also cause institutions to leave town, at least temporarily. An earthquake in 551 which struck Berytus (modern Beirut) left its “world famous architectural treasures… reduced to a heap of rubble.”197 Berytus was also famous for its legal studies, and the law school and professors moved to Sidon until Berytus was rebuilt years later.”198 Difficult times and memories triggered the impulse to leave town to escape those memories or to avoid future earthquakes.

The immense devastation to the physical environment caused by an earthquake could be overwhelming, and a common response was to seek help from the emperor. Embassies from communities or provinces to the imperial government were ubiquitous in antiquity.199 Suetonius, in his Life of Tiberius, describes one of the soon-to-be emperor’s earliest civil duties as “advocate of the people of Laodicea, Thyatira, and Chios who had

195 Seneca, 6.1.10.
196 Theophanes, 178.
197 Agathias, 2.15.2.
198 Agathias, 2.15.4.
199 See Andrew Gillett, Envoys and political communication in the late antique west, 411-533, (Cambridge: Cambridge University Press, 2003) for argument to the ubiquity of provincial embassies to imperial govt. esp. ch. 1. Also Millar, The Emperor in the Roman World, 411-423.
appealed for relief, because of losses incurred in an earthquake”. Communities affected by earthquakes often received aid from the emperors due in part or in total to these embassies. In 27 B.C.E. Chaeremon, a peasant from Tralles, on the island of Chios, journeyed to Cantabria to plead with Augustus for aid. Augustus not only sent money for reconstruction, but also an imperial commission to oversee the rebuilding. An inscription dating to the 2nd century from Stratonicea, Lycia honors Leo, a local septuagenarian who traveled to Rome to petition Antoninus Pius who subsequently gave 250,000 denarii for reconstruction. Philostratus, in the Lives of the Sophists, praises Aristides’ oratorical skill in influencing Marcus Aurelius to aid the city of Smyrna. In late antiquity the role of ambassador was increasingly played by clergy. Following the earthquake in Antioch in 528, the patriarch Euphranius reported the damage, destruction and the loss of 5,000 lives to the emperor Justinian. Embassies to the emperor petitioning for aid were ubiquitous in antiquity, and were often successful in gaining money, manpower and tax exemptions for disaster stricken cities.

While petitions for aid were often successful, citizens of cities affected by earthquakes rebuilt certain buildings at their own expense. Usually these were temples or other buildings with personal importance to the benefactor. There are numerous inscriptions

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200 Suetonius, Tiberius, 8.
201 Agathias, 2.17.
202 CIG 2721
203 Philostratus, Life of the Sophists, 2.9.2.
204 See Gillett, ch. 4. In which he argues that clergy seem to have become ambassadors due to a lack of secular interest, but in reality the clergy appropriated this job because it was important and generated social prestige.
205 Malalas, 443.
which accompany rebuilding work paid for by private citizens.\textsuperscript{206} An interesting inscription from Sardis shows that the niece of the original builder of the local Temple of Hera restored it after an earthquake.\textsuperscript{207} Another unusual benefactor is recorded in Pompeii after the earthquake of 62: “Numerius Popidus Celsinus, son of Numerius, at his own expense completely rebuilt the Temple of Isis, which had collapsed in an earthquake. Although he was only six years old…”!\textsuperscript{208} Temples seem to have been most often reconstructed at private expense, but there is evidence that they were not the only ones. An inscription from Interpronium, in eastern Italy, from the 2\textsuperscript{nd} century records two men paying for the restoration of the Public Weights Office.\textsuperscript{209} Another inscription records the rebuilding of the public baths in Pescolardo in Samnium at the end of the 1\textsuperscript{st} century.\textsuperscript{210} These civic minded benefactors deemed certain buildings imperative to life in their towns and took matters into their own hands to have them rebuilt. This is a typical type of \textit{euergetism} which had been prevalent since the Greek city state.\textsuperscript{211}

Occasionally, residents might completely rebuild their town, with no help from the government, but this was remarkable. Tacitus notes that: “In the Asian province one of its famous cities, Laodicea, was destroyed by an earthquake in this year [60C.E.], and rebuilt from its own resources without any subvention from Rome”.\textsuperscript{212} More than three-hundred years later, in 375, Symmachus observed the remarkable work of Benevento:

\textsuperscript{206} \textit{IG} 4.203 records rebuilding of Temple of Eueteria in Corinth in mid 1\textsuperscript{st} c; \textit{Lindos} 2.449.13-6 records rebuilding of sanctuary of Asclepius by Tiberius Claudius Antipater and his son Claudius Dioclida; \textit{CIL} 8.2481 records the rebuilding of a city arch in 267 by Clodius Victor and Flavius Paulinianus; \textit{IGR} 3.739 records the aid of Opramoas to cities which had suffered in the earthquake.
\textsuperscript{207} \textit{SEG} 28.928
\textsuperscript{208} \textit{CIL} 10.846=ILS 6367.
\textsuperscript{209} \textit{CIL} 9.3046=ILS 5609.
\textsuperscript{210} \textit{CIL} 9.1466.
\textsuperscript{211} Paul Veyne, \textit{Bread and Circuses}, 11.
\textsuperscript{212} Tacitus, \textit{Annals}, 14.27.1.
“Embellishing the city with their own resources is a hard task. For after the earthquake they were left with practically nothing”. It is unknown whether these noteworthy cases were financed by one or a few wealthy citizens, or if everyone worked together as a community. The city of Pompeii is the most famous example. There was little imperial aid for almost a decade after the earthquake, and the preserved buildings provide evidence of how the city went about rebuilding. This paper will exam Pompeii’s rebuilding in a later section. Nevertheless it was possible, if unusual, for a city or town to rebuild without imperial assistance.

So far the responses during and after earthquakes have been based on survival instincts or else the desire to help, find help, or take rebuilding matters into one’s own hands, but there is evidence that people also responded in a negative manner. Panic is a natural instinct based on fear, but panic has the ability to overwhelm one’s sense of right and wrong. In the year 51 Tacitus mentions repeated earthquakes in Rome during which “as terror spread the weak were trampled to death by the panic-stricken crowd”. Obviously there is no way to tell whether the people were able to avoid trampling the weak to death, but this response had a very negative outcome. Philostratus’ Life of Apollonius of Tyana describes a financial scam that supposedly happened in the Hellespont in the middle of the 1st century:

At one time the cities on the north side of the Hellespont were struck by earthquakes, and the Egyptians and Chaldeans went begging about through them to collect money, pretending that they needed ten talents to offer sacrifices to Earth and Poseidon. And the cities began to contribute under the stress of fear, partly out of their common funds

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213 Symmachus, ep. 1.4.
214 Tacitus, Annals, 12.43
and partly from private sources. But the impostors refused to offer the sacrifices on behalf of their dupes unless the money was deposited in the banks.\textsuperscript{215}

Apollonius eventually “drove out the fraudsters” and was able to identify the cause of the earthquakes and offer appropriate sacrifices to cause their cessation.\textsuperscript{216} Four inscriptions found outside four of the gates of Pompeii show what may have been the rectification of a land scheme which took place after the earthquake of 62. The inscriptions report that the tribune, Titus Seudeius Clemens, under the authority of the emperor Vespasian restored public land to the city of Pompeii which had been taken by private persons.\textsuperscript{217}

The story from Philostratus and the Pompeii inscriptions show that the chaotic aftermath of natural disaster brought out immoral or crooked actions as well as the good responses of many citizens. Following the earthquake which devastated Antioch in 526, Malalas noted a response that may have happened after other disasters: “Some of the citizens who survived gathered whatever of their possessions they could and fled. Peasants attacked them, stole their goods and killed them.”\textsuperscript{218} Looting is a typical response to the chaos following a natural disaster.

People had various responses to earthquakes in antiquity. The initial reactions were instinctive behavior: fear, panic and prayer, which might be the same with any destructive or frightening disaster anywhere in the world or throughout time. From experience living in a seismically active region, people knew their best bet for survival in

\textsuperscript{215} Philostratus, \textit{Life of Apollonius of Tyana}, 6.41.
\textsuperscript{216} Ibid.
\textsuperscript{217} Joanne Berry, \textit{The Complete Pompeii}, (New York: Thames and Hudson, 2007), 242-243. Berry explains that the inscriptions had traditionally been connected with the earthquake, but more recently have been seen as an attempt by Vespasian to rectify abuses across the empire in order to bring in more money and may have had nothing to do with the earthquake.
\textsuperscript{218} Malalas, 420.
the event of an earthquake: find open spaces or sturdy buildings. They protected those that they could and rescued those that needed to be rescued. Following an earthquake some people blamed their location and moved as far away as they were able. Wealthy or civic minded citizens restored temples and public buildings when they had the means. Certain towns banded together to restore their property and their lives as best they could. As human nature seems to dictate, some individuals used the turmoil caused by earthquakes to take advantage of others. One of the actions of citizens with the biggest effect was petitioning the emperor for aid.

Imperial Response

Emperors from Augustus to Justinian received petitions to aid cities impacted by earthquakes and other seismic activity. The sources show that a great number of the emperors responded by giving some sort of aid to the communities. Emperors could give money directly to the city for helping rescue victims of the earthquake. They gave money in order to help with rebuilding. They also helped the survivors of the earthquakes by providing them with financial assistance. Another form of financial assistance was the remission of taxes for a specified period of time. Emperors could also appoint commissions to oversee the reconstruction of areas devastated by earthquakes. Aside from practical assistance, emperors responded to earthquakes by praying and showing humility.

One way in which emperors could help cities destroyed by earthquakes was to give money in order to rescue survivors trapped in the rubble. Theophanes and John Malalas, referring to the same earthquake in Pompeiopolis, in the province of Mysia, but dating it
8 years apart, report fissures opening in the earth which swallowed half the city.\textsuperscript{219} Malalas writes: “The emperor made many benefactions to rescue those trapped beneath the ground.”\textsuperscript{220} Although there are no other specific mentions of money given specifically for “excavations to rescue those beneath ground” it is possible that some part of the aid money given to other communities was used for this purpose.

While the emperor helped earthquake survivors in several ways, perhaps the simplest was the remission of taxes or tribute for a certain period of time. In this way those trying to rebuild their own homes and lives did not have to deal with the burden of paying taxes as well. Tiberius exempted the cities of Asia for five years after the 17 C.E. earthquake.\textsuperscript{221} Five years later, Tiberius exempted taxes for Cibyra in Asia and Aegium in Achaia for three years, because they had been “ruined” by an earthquake.\textsuperscript{222} Claudius also granted tax exemptions for earthquake damage: five years to the city of Apamea in 53, and for an unspecified amount of time to the major city of Antioch in 47.\textsuperscript{223} The tax exemption for Antioch seems to have carried the stipulation that the money that would have been sent to the government be used “for the reconstruction of the arcades which had been built in the time of Tiberius Caesar.”\textsuperscript{224} Hadrian gave tax exemptions to communities which had been damaged by “famines, plagues, and earthquakes” during his reign.\textsuperscript{225} Other emperors who, according to the sources, gave tax exemptions were

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\textsuperscript{219} Malalas, 437; Theophanes, 216.  \\
\textsuperscript{220} Malalas, 437.  \\
\textsuperscript{221} Tacitus, \textit{Annals}, 2.47.3.  \\
\textsuperscript{222} Tacitus, \textit{Annals}, 4.13.1  \\
\textsuperscript{223} For Apamea, Tacitus, 12.58.2; for Antioch, Malalas, 246.  \\
\textsuperscript{224} Ibid.  \\
\textsuperscript{225} SHA, Hadrian, 21.5-7
\end{flushleft}
Constantius in the late 3rd or early 4th century\textsuperscript{226}, Leo in 458\textsuperscript{227}, and Justinian in 528\textsuperscript{228}. The tax exemption was an easy way to show imperial support for cities and provinces impacted by earthquakes and other natural disasters.

Emperors also gave money for rebuilding cities ruined by earthquakes. The literary sources often say only that the emperors donated money for rebuilding or reconstruction: “Augustus restored the city,”\textsuperscript{229} or “Tiberius generously contributed to the restoration of this and many other cities…”\textsuperscript{230} Some of the sources give more concrete figures: Tiberius promised Sardis ten million \textit{sesterces} after the earthquake in 17 which destroyed it and 11 other cities in Asia.\textsuperscript{231} Augustus’ \textit{Res Gestae} states that along with theatrical events, athletics, and gladiatorial games he also gave “vast sums of money…to towns in the provinces which had been destroyed by earthquakes or fire…”\textsuperscript{232} Antoninus Pius gave “massive sums” to the Greek cities Lycia, Caria, Cos, and Rhodes in the middle of the 2\textsuperscript{nd} century.\textsuperscript{233} According to the literary sources, emperors responded to the petitions of those cities damaged by earthquakes with large sums of money to be used to rebuild the city.

The epigraphic evidence upholds the idea that the emperors gave money for rebuilding, but this evidence points to the reconstruction of specific buildings. The inscriptions generally show patronage to rebuild temples or public buildings. Epigraphic

\textsuperscript{226} Malalas, 313.
\textsuperscript{227} Evagrius, 2.12.
\textsuperscript{228} Malalas, 443. Although there were many earthquakes during Justinian’s reign, and he often gave aid, this is the only source which specifically mentions tax exemptions.
\textsuperscript{229} Malalas, 229.
\textsuperscript{230} Strabo, 13.4.8.
\textsuperscript{231} Tacitus, \textit{Annals}, 2.47.1-4.
\textsuperscript{232} Res Gestae
\textsuperscript{233} Pausanius, 8.43.4
evidence is admittedly spotty, and there may have been inscriptions for every building in these rebuilt towns, but only some remain. An inscription from Samos shows that Tiberius had rebuilt the Temple of Liber Pater because it had collapsed because of age and an earthquake.\(^{234}\) Titus rebuilt a clock and all its ornaments which had been damaged by an earthquake in 80 in the town of Sorrento.\(^{235}\) He also rebuilt the tetrastyle temple of the Genius of the colony of Nola which had been destroyed in the same earthquake.\(^{236}\) An inscription dating to 82 claims Domitian rebuilt a theater in Nuceria Alfaterna which had been destroyed by an earthquake.\(^{237}\) In 374 the imperial family of Valentinian I, Valens, and Gratian rebuilt the bath complex in Reggio Calabria.\(^{238}\) Malalas states that Marcian rebuilt the summer bath, several other buildings as well as the aqueduct in Tripolis in the mid 5th century.\(^{239}\) This is interesting because Malalas usually writes in general terms about imperial rebuilding, but on this occasion he is very specific, which does not coincide with any particular inscription, but is similar to many of the inscriptions concerned with rebuilding after earthquakes.

Along with giving aid money for reconstruction, emperors also gave money to the survivors in order to rebuild and continue their lives. The sources are not clear as to how the money was dispersed or what the burden of proof was for qualifying for money, but the emperors are repeatedly described as giving money to the survivors. Dio Cassius says that Augustus “set aside money for the inhabitants of Paphos, who had suffered in an

\(^{234}\) \textit{AE} 1912, 216.
\(^{235}\) \textit{CIL} 10.1481=\textit{IG} 14.729=\textit{IGR1} 435.
\(^{236}\) \textit{CIL} 10.1235, 1236.
\(^{237}\) \textit{Catalogo epigrafi}, 1999, pp. 91-3.
\(^{238}\) \textit{AE} 1913, 227.
\(^{239}\) Malalas, 367.
In 37 Antioch and Daphne were rattled by an earthquake and Caligula “gave a great deal of money to the city and its surviving inhabitants.” Malalas writes that following earthquakes Caligula, Vitellius, Vespasian, Constantine, Anastasius, Justin and Justinian each “gave generously to the survivors.” These were not the only emperors that Malalas cites as having aided the survivors, but in each of these cases he described it in the same way. He also claims that Hadrian “bestowed” money on the survivors, that Claudius [268-270] gave money to the survivors. Theophanes claims that Justinian “rewarded” the survivors. Emperors from Augustus to Justinian displayed their philanthropic impulse by helping subjects whose lives and property had been ruined by earthquakes.

An interesting supplement to the imperial contribution to survivors of earthquakes was an increase of rank for survivors. This does not seem to have happened as often as the monetary reward, or else it was not noted by the sources as often. Hadrian, along with restoring the city of Cyzicus in the province of the Hellespont “bestowed money and ranks on the surviving citizens”. Malalas claimed that Justinian “raised the status of the inhabitants” of Antioch, Laodicea, and Seleucia, after they survived an earthquake in 528. Theophanes must have been talking about raising their status when he said that

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240 Dio Cassius, 54.23.7.
241 Malalas, 243.
243 Malalas, 279.
244 Malalas, 323.
245 Theophanes, 216.
246 Malalas, 279.
247 Malalas, 443.
Justinian “rewarded the survivors” of the same earthquake.\textsuperscript{248} Increasing the status of an earthquake survivor showed the goodwill of the emperor and his desire for those affected by an earthquake to rebuild not only their property but also their lives. It also was an easy and cheap way to offer aid to those who had been affected.

Another major way in which emperors aided communities dealing with earthquake damage was to send ambassadors or commissions to oversee the rebuilding work. As usual, Augustus was the first emperor to do this. The “humble peasant” Chaeremon, who petitioned Augustus for aid in 27 B.C.E., was rewarded with a statue by the inhabitants of Tralles, on the island of Chios, for getting the emperor to send a “commission to arrange for the city to be rebuilt”.\textsuperscript{249} Augustus’s successor Tiberius dealt with a major earthquake in 17 C.E. which destroyed 12 cities in Asia. He sent money, exempted them from taxes, and sent a “senatorial commission to assess the situation on the spot and administer relief.”\textsuperscript{250} He even chose a former praetor instead of a former consul since Asia was governed by a former Consul and he wanted to avoid “problems arising from rivalry between equals.”\textsuperscript{251} Dio Cassius claims that the man Tiberius sent was “of consular rank” and had five lictors with him.\textsuperscript{252} Following the eruption of Mt. Vesuvius in 79, Titus drew lots in order to arrange for a board of ex-consuls to oversee relief.\textsuperscript{253} According to Malalas, in 97 Nerva sent a senator named Zarbos to rebuild the city of

\textsuperscript{248} Theophanes, 216.
\textsuperscript{249} Agathias, 2.17
\textsuperscript{250} Tacitus, 2.47.4.
\textsuperscript{251} Ibid.
\textsuperscript{252} Dio Cassius, 57.17.7
\textsuperscript{253} Suetonius, \textit{Tiberius}, 8.3-4.
Diocaesarea in Cilicia. Marcus Aurelius gave the job of rebuilding Smyrna after an earthquake in 178 to a senator of praetorian rank. Emperors not only sent money for public and private rebuilding, but in many cases made sure that the money was used correctly by sending commissions to oversee the rebuilding work.

In late antiquity the emperors tried to help earthquake victims through less pragmatic, more spiritual means: they prayed along with the populace and they made shows of humility. Christians believed that earthquakes and other disasters were divine punishment sent from God to castigate the people for their sins. The pious Christian emperors of late antiquity shared these beliefs and they did their best to atone. At the end of the fourth century Constantinople was wracked with disasters as the earth shook and the sky was filled with flames. Luckily for the Constantinopolitans “God heard the prayers of the emperor Arcadius and the Christian people, and averted the imminent disaster”. In 447 Constantinople suffered from another earthquake and Theodosius II led the senate and the populace in a procession of prayer. According to Malalas Theodosius actually led the procession of prayer barefoot, a sign of humility before God, which was another way some Christian emperors tried to atone for the sins of the empire.

Following an earthquake in Antioch in 526, an upset Justinian:

threw aside his crown and imperial robes, and, dressed in dirty rags, he wept for many days, and even on feast days he entered the temple in wretched garments, for he could not bear to wear any symbols of power. And all those who were in the city gathered in their rags from all parts of the countryside about 7 miles outside the city, and for seven days they fasted and prayed.
He also sent men to help clear and rebuild the city, which may have been more helpful to the people of Antioch than his inability to wear symbols of power. Thirty-one years later a massive earthquake shook Constantinople and Justinian may or may not have dressed in rags, but he refused to wear a crown for 30 days.\footnote{Malalas, 490.} Cedrenus concurs with Malalas and adds that he even appeared on Christmas day and epiphany without his crown.\footnote{Cedrenus, 677.} These displays of imperial humility and mourning helped to show the people that the emperors were concerned with their plight and that they would do what they could to prove to God that the Romans were contrite and deserved to be shown mercy.

*Which Emperors Responded?*

Helping restore cities, towns, buildings and lives impacted by earthquakes was an act carried out by a large number of Roman emperors. Augustus was the first emperor to help victims of earthquakes and he used the fact as propaganda in his *Res Gestae*. He also rebuilt the city of Judaean Salamine and renamed it Diosopolis in 31 B.C.E.\footnote{Malalas, 229.} Following the earthquake of 27 B.C.E. Augustus helped rebuild the cities of Tralles.\footnote{Strabo, 12.8.18; Agathias, 2.17.} He “set aside money” for the city of Paphos, Cyprus in 17 B.C.E.\footnote{Dio Cassius, 54.23.7.} He also restored Naples in 2 B.C.E after it had been destroyed by an “earthquake and fire.”\footnote{Dio Cassius, 55.10.9.} As with many other imperial actions, Augustus set the precedent with earthquake aid which would be followed by Roman emperors for nearly half a millennium.
While Augustus was the first emperor to aid earthquake stricken locales, he certainly was not the last. His successor Tiberius was perhaps the most generous following the earthquake in 17 C.E. While not considered generous to the provinces overall, he helped rebuild at least twelve cities impacted by this quake, giving them tax exemptions and a senatorial commission as well as vast sums of money including the ten million *sesterces* for Sardis alone.\(^{265}\) Claudius helped Antioch in 47\(^{266}\) and Crete several years later.\(^{267}\) Vespasian rebuilt “on a grander scale than before the many cities throughout the Empire which had been burned or destroyed by earthquakes.”\(^{268}\) Titus outdid many of his imperial peers following the eruption of Vesuvius: he actually traveled to the disaster site\(^{269}\) and according to Suetonius “he showed far more than an emperor’s concern: it resembled the deep love of a father for his children…by helping the victims to the utmost extent of his purse.”\(^{270}\) Hadrian helped various communities in Italy and also Nicomedia.\(^{271}\) Antoninus Pius gave “vigorous support” to the cities of Lycia, Caria and the islands of Cos and Rhodes in 142.\(^{272}\) Marcus Aurelius gave money and assigned a senator for overseeing the rebuilding of Smyrna.\(^{273}\) And the Byzantine emperor Leo the Great reconstructed Antioch and exempted its inhabitants from 1000 talents of tax after an earthquake in 458.\(^{274}\) Like Leo, these emperors are all considered “good” emperors

\(^{265}\) Tacitus, 2.47.
\(^{266}\) Malalas, 246.
\(^{267}\) Malalas, 250.
\(^{268}\) Suetonius, *Vespasian*, 17.
\(^{269}\) Dio Cassius, 66.21.24.
\(^{270}\) Suetonius, *Titus*, 8.3.
\(^{271}\) SHA *Hadrian*, 21.5-7.
\(^{272}\) Pausanias, 8.43.4.
\(^{273}\) Dio Cassius, 72.32.3.
\(^{274}\) Evagrius, 2.12.
and it fits with their character to show generosity and philanthropy to victims of destructive earthquakes.

While popular emperors helped provinces, cities and people rebuild after earthquakes, their unpopular and short-lived counterparts often did the same. Caligula “gave a great deal of money to the city [Antioch] and its surviving inhabitants” following an earthquake in 37. Even Vitellius, who reigned for eight months in “the year of the four emperors,” and was noted by Suetonius as excessively cruel “gave generously to the survivors and the city [Nicomedia, Bithynia] for reconstruction”. Considered as bad an emperor as his father Marcus Aurelius was considered “good,” Commodus still found the time and generosity to restore the city of Nicomedia, Bithynia after it was destroyed again in 181. Somehow between ousting Zeno in 475 and being ousted by Zeno in 476 as well as angering most of the Byzantine populace, Basiliscus still found time to bestow gold on the city of Gabala in Syria. While it is not surprising that many of the most successful emperors helped out earthquake victims, it is surprising that many of the most reviled emperors, capable of terrible cruelty and malevolence also helped those hurt by earthquakes.

The emperor Justinian also dealt with many earthquakes. He helped rescue those swallowed by the ground, as well as others who survived an earthquake in Pompeiopolis, Mysia in 527. He also helped excavate the city of Laodicea, after an earthquake the

\[\text{\footnotesize{275 Malalas, 243.}}\]
\[\text{\footnotesize{276 Malalas, 259.}}\]
\[\text{\footnotesize{277 Malalas, 289.}}\]
\[\text{\footnotesize{278 Malalas, 378.}}\]
\[\text{\footnotesize{279 Malalas, 436; Theophanes, 216.}}\]
following year.\textsuperscript{280} He gave “great riches for the restoration and rebuilding of the city of Antioch” for the same quake.\textsuperscript{281} Malalas records that he “gave generously” to the cities of Amasia and Myra in 529 and 530.\textsuperscript{282} He rebuilt fortifications in Corinth following earthquakes in 543.\textsuperscript{283} In 551 he sent money to provinces which had been damaged by an earthquake after which “the sea retreated for a mile and many ships were destroyed.”\textsuperscript{284} After an earthquake caused the dome of the Hagia Sophia to collapse in 558, Justinian had it rebuilt.\textsuperscript{285} Justinian was faced with many damaging earthquakes in his reign, and he helped the cities and subjects impacted by most of them.

Roman emperors used several methods to help those affected by earthquakes. They offered tax exemptions, gave money for public and private reconstruction, sent commissions to oversee reconstruction, and they prayed and showed humility to appease the divine. Pagan and Christian emperors helped the victims equally. “Good” emperors and “bad” emperors both acted philanthropically towards their subjects who had suffered due to earthquakes. From the early days of Augustus’ Rome to the last decade of Justinian’s semi-reunified empire, helping those who suffered from natural disasters was an important action for Roman emperors.

\textit{Response to Response}

The people who suffered through earthquakes and received help, whether imperial, provincial, or local often saw fit to formally thank those who had helped them. The

\textsuperscript{280} Malalas, 443.
\textsuperscript{281} Theophanes, 178.
\textsuperscript{282} Malalas, 448.
\textsuperscript{283} Procopius, \textit{Buildings}, 4.2.24.
\textsuperscript{284} Malalas, 485.
\textsuperscript{285} Malalas, 489.
“humble peasant” Chaeremon who petitioned Augustus on his own volition, was honored with a statue by the citizens of Tralles who benefitted from Augustus’ aid. Augustus himself had a “sacred contest” dedicated to him by the Neapolitans after restoring their city following an earthquake in 2 B.C.E. Tiberius’ reconstruction of 12 Asian cities after the 17C.E. earthquake received many forms of thanks. An inscription from a building in ancient Aegae calls Tiberius the “founder” of twelve cities damaged by the earthquake. The people of those twelve cities were so thankful for the help of Tiberius that there are inscriptions naming him as founder and honoring him for restoring the cities, and an inscription from Sardis that shows that the cities’ envoys met to discuss ways of thanking Tiberius. Malalas records a story in which Nerva sent a senator named Zarbos to the city of Diocaesarea in Cilicia in 97 C.E. Zarbos “applied himself with great energy to the rebuilding of the city, making many improvements to it.” Nerva died during the rebuilding period so the citizens renamed their city after the senator and it was called Anazarbus from that point in time. Rebuilt cities were sometimes named after the emperors who had offered aid. Nicomedia was renamed Hadriane after Hadrian had it rebuilt following an earthquake in either 120 or 128. Salamis in Cyprus was renamed Constantia after Constantius Chlorus “gave many extremely generous gifts, undertook rebuilding, and exempted the surviving citizens from

286 Agathias, 2.17.
287 Dio Cassius, 55.10.9.
288 CIL 3.7096.
289 Ibid.
290 CIL 10.1624.
291 IGR 4.1514.
292 Malalas, 267.
293 See Guidoboni et al., Catalogue, 227, who argues that this story is a fiction.
294 Guidoboni et al., Catalogue, 233.
taxes for four years”. Anazarbus in Cilicia was renamed Justinopolis in 525, but Theophanes records that he renamed it that himself. The help from the imperial government was important to the survivors of earthquakes. They issued thanks in inscriptions, statues, games and the names of the towns themselves.

Conclusion

Earthquakes in antiquity provoked many of the same responses that have been found throughout history into the present. Natural disasters caused fear and panic mixed with some knowledge gained from experience. People who had lived through or heard stories of earthquakes knew where to go in a seismic event. They looked for open space or strong buildings. Regardless of religion, they prayed for salvation and deliverance, sometimes they prayed for death. Survivors in good shape searched for those in bad shape and they tried to help. The sources of the Roman Empire show that during an earthquake there were reactions varying from involuntary panic, to heroic rescues, to intense prayer.

Following an earthquake the local populace had several distinct reactions. Some residents literally ran for the hills, or at least other cities where they imagined they had a better shot at living out their lives in geographical stability. Some realized the extent of the damage was too great to deal with alone and set out to secure imperial help. Others took matters into their own hands, or at least their own wallets, and paid for certain buildings, especially temples, to be rebuilt. Rarely and remarkably, some towns were able to completely rebuild on their own. Unfortunately some people tried to take

295 Malalas, 313. Cf. Guidoboni who dates the quake to Constans II.
296 Theophanes, 171.
advantage of a bad situation. They used scams and schemes to improve their own lot, at
the expense of others.

Roman emperors typically responded to earthquakes in one of several munificent
manners. They helped fund search and rescue. They waived taxes for certain time
periods, or for a certain amount in order to encourage the survivors to rebuild their lives
and communities. They also gave money directly to the towns in order to rebuild their
infrastructure and public buildings. The emperors also helped the survivors financially.
We do not know how this process worked, but it seems to have been a common response
to destructive earthquakes throughout the empire. The emperors could appoint
government officials to oversee the reconstruction process in towns destroyed by
earthquakes. They prayed for the end of the earthquakes, and sometimes this was seen to
have worked. It was not only the traditionally good emperors that helped earthquake
victims. It was a practice that was common to Augustus and Justinian as well as Caligula
and Commodus.
CHAPTER 5: ARCHAEOLOGICAL EVIDENCE

This paper has examined the literary accounts of the earthquakes and the response to them in Sardis, Lydia in 17 C.E. and Pompeii, Campania in 62 C.E. and will now look at the archaeological record to illuminate the rebuilding process and the prolonged disruption to everyday life. The earthquakes in Sardis and Pompeii took place less than 50 years apart, but the circumstances were very different. The earthquake in Sardis was massive and veritably annihilated the city of Sardis as well as causing the destruction of other Asian cities for many miles around. The 62 C.E. earthquake in Campania damaged Pompeii and some neighboring cities, but not to the extent of the Sardis earthquake. Most buildings in Sardis were rendered totally useless whereas the damage in Pompeii was extremely varied: some buildings sustained extensive damage; some were hardly damaged at all. The imperial response was also significantly different. Tiberius offered Sardis ten million sesterces, five years of tax exemptions, and a commissioner to oversee the rebuilding efforts. In Pompeii, the damage does not seem to have been serious enough to warrant the help of the emperor Nero. In both cases the suspension of daily life was significant. The fresh start of Sardis and Vesuvius’ preservation of post-earthquake Pompeii provide a unique archaeological look into ancient practices of rebuilding and repairing on massive and moderate scales.

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297 Tacitus, Annals, 2.47.
298 Nero’s reputation as a “bad” emperor should not be seen as the reason for his refusal of aid. Compare Tacitus, Annals, 15.42-43, where Nero helped to shelter the homeless and rebuild Rome after the fire of 64.
Sardis, 17 C.E.

The city of Sardis sits on the Sardian plain in western Asia Minor, near the Hermus River and at the foot of Mt. Tmolus. The plain has been inhabited since the 3rd millennium B.C.E. and the city of Sardis has been occupied since at least 1500 B.C.E. It was the capital of the Lydian Kingdom whose last and most famous king was the wealthy Croesus. Croesus lost Sardis to the Persian King Cyrus in 547 B.C.E.\(^{299}\) and Sardis would remain in Persian hands for over two centuries. The burning of Persian Sardis by Greeks during the Ionian Revolt in 498 B.C.E was a catalyst for the Persian Wars of the fifth century B.C.E.\(^{300}\) The Persians surrendered Sardis peacefully to Alexander the Great in 334 B.C.E., and it was eventually won by Seleucus I in 281 B.C.E. becoming the capital of Seleucid Asia Minor for nearly 100 years. The Seleucid rulers built the city into a true Hellenistic city with a *boule*, *gerousia*, two gymnasia, and temples. Following a half century of rule by the Kings of Pergamum, the city went to the Romans when King Attalus bequeathed the Pergamene kingdom to the Romans in 133 B.C.E. In 17 C.E. the entire region was struck by the “worst earthquake in human memory”, and Sardis was destroyed.\(^{301}\)

The earthquake of 17 devastated the city of Sardis as well as eleven other cities in western Asia Minor.\(^{302}\) Sardis suffered the most damage, as the city was almost completely annihilated. George Hanfmann, who excavated Sardis with Harvard University for 18 years writes that the “cataclysmic earthquake…made very nearly a

\(^{299}\) Herodotus, *History*, 1.84.

\(^{300}\) Herodotus, 5.101-102.

\(^{301}\) Pliny, *Natural History*, 2.86.

\(^{302}\) According to Tacitus, the other cities were Magnesia-by-Sipylus, Temnus, Philadelphia, Aegeae, Apollonis, Mostene, Hierocaesarea, Myrina, Cyme, and Tmolus. *Ann.*, 2.48.
The immense destruction meant that the Romans were able to start nearly from scratch in rebuilding Sardis as a “typical creation of the Asiatic variant of Roman architecture, much like Ephesus, Pergamon, Aphrodisias, Smyrna, and Miletus, all opulent, flourishing cities of Rome’s richest province.”

The emperor Tiberius responded by offering massive Imperial aid. He provided ten million sesterces for rebuilding, and remitted Sardis’ tax burden for five years. Since Sardis was the most heavily damaged it received the greatest amount of aid; the other cities seem to have received aid in relation to the amount of damage they sustained. Tiberius also sent ex-praetor Marcus Ateius as a senatorial inspector to oversee the rebuilding and “rehabilitate the sufferers.”

Marcus Ateius was sent to direct the rebuilding and reconstruction of those towns damaged in the earthquake, as well as to help the survivors. In Sardis there was very little repair work to be done since most of the buildings and infrastructure were either completely destroyed or rendered unusable. Ateius’ job therefore was to plan, staff, and execute the rebuilding from the ground up of a major provincial town. “He did apparently leave a master plan for the reconstruction of Sardis as a ‘modern’ city.” He must have assembled a staff which would need to include an urban planner, and specialists in road building, public works, construction, and surveying. Hanfmann argues that the urban planner must have worked closely with the Imperial Works Office

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306 Ibid.
308 Ibid.
in Rome due to the fact that the design “comes right out of the Augustan pioneering phase of Imperial architecture.”\textsuperscript{309} The specialists may already have been living in Sardis or the surrounding areas, they may have been members of the emperor’s staff, or they may have been legionaries who were familiar with construction techniques.\textsuperscript{310} Ateius would also delegate authority to finding material suppliers as well as laborers. The emperor might have helped to provide labor in the form of convicts or the army, but the sources are silent on this matter.\textsuperscript{311}

Before any construction could begin, Ateius would have had to deal with several priorities, the first being sheltering the homeless. The excavators have not found any remnants of this emergency housing, but speculate that Sardians may have lived there for up to three generations.\textsuperscript{312} Possibly some survivors moved to neighboring towns which were not damaged as badly. There is also the possibility that some of the aid money sent by Tiberius was used to procure tents. Similar to the earthquake in L’Aquila, Italy in April of 2009, residents may have lived in tent cities erected by the government. These tents would leave no archaeological trace which would fit with the lack of evidence.

The next step for Ateius and his staff would be to assess the damage caused by the quake and prepare the construction site. According to the sources and the archaeology, almost no buildings remained undamaged. Since this was the case, the builders would have had to demolish buildings which may have remained partially upright. Moving debris and salvaging construction material would have been the next step and would have

\begin{footnotes}
\footnotetext{309}{Ibid.}
\footnotetext{310}{For an introduction to planning and labor practices on large scale projects see Ramsay MacMullen, “Roman Imperial Building in the Provinces” in Harvard Studies in Classical Philology, 64 (1959): 207-235.}
\footnotetext{311}{Ibid.}
\footnotetext{312}{Hanfmann, Sardis, 141.}
\end{footnotes}
required a massive effort. The manpower needed to move an entire city worth of debris might have called for military help.\textsuperscript{313} There is also the possibility that the emperor sent convicts, free men on his staff, slaves, or even forced labor by corvee.\textsuperscript{314} The excavators note a “great number of recut and reused stone blocks…(which) points to stockpiling of masonry salvaged from Hellenistic buildings after the earthquake of A.D. 17.”\textsuperscript{315} Along with clearing the debris the workers established temporary dumps for unusable material.\textsuperscript{316} Since the amount of debris was so great that it could not be completely disposed of, some of it was used to terrace and reshape the site for its future construction. The excavators have found the remnants of Hellenistic houses dumped on the area of the city known as the Upper Terrace, and “destruction fill heaped up to 3 meters above the Hellenistic level within the foundations of the Main Avenue and the Synagogue.”\textsuperscript{317} Reusing the remains of the buildings shattered by the earthquake made good fiscal and logistical sense. Preparing the site for construction demanded an enormous output of energy and intelligent planning.

Building roads, sewer facilities and the water system was the next important step in preparing Sardis for rebuilding its structures. The roads were necessary to move construction material and the new utilities were built in concert with the roads: sewer pipes and water pipes were laid underneath and next to the new streets.\textsuperscript{318} The Main Avenue of Sardis and the aqueduct were both started sometime in Tiberius’ reign, and

\textsuperscript{313} MacMullen, “Imperial Building in the Provinces,” 214-217.
\textsuperscript{314} MacMullen, “Imperial Building in the Provinces,” 213-214.
\textsuperscript{315} Hanfmann, Sardis, 141.
\textsuperscript{316} Ibid.
\textsuperscript{317} Ibid.
\textsuperscript{318} Ibid.
were most likely finished at the same time during the reign of Claudius (41-54 C.E.). These were some of the earliest parts of the city replaced, and they were not completed for several decades. The completion of roads and utilities by 54 C.E. concluded what Hanfmann calls the “emergency phase” of the city reconstruction.

The reconstruction of Sardis was a long term process which was not completed until the third century C.E. The Temple of Hera was one of the first buildings to be rebuilt: it was finished sometime between 20 and 30 C.E., most likely with private financing. The Artemis precinct was made usable rather quickly by repairing the *cella* but the peristyle colonnade was not begun until close to a century later during the reign of Trajan (98-117). The building known as Building D in the Artemis Precinct was also constructed during the first century. The stadium was built sometime within the first century C.E. The enormous Bath-Gymnasium complex which “represents a straightforward combination of a Roman bath with the *palaestra* of a Greek gymnasium,” was begun sometime in the first century. Its completion took until as late as the middle of the third century.

The ongoing Sardis excavations will continue to yield information on the timing of the reconstruction of Sardis, but the evidence from earlier excavations illustrates the amount of time it took to rebuild a city from scratch. Even with a large sum of money from

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320 Hanfmann, *Sardis*, 143.
321 Ibid.
322 Ibid.
323 Ibid.
324 Ibid.
Tiberius, and professional planners and managers, the rebuilding of Sardis was not an easy accomplishment. Demolishing dangerous remnants of buildings, clearing away tons of debris without heavy machinery, planning roads and utilities, and building religious structures, civic buildings and private housing may have started soon after the earthquake, but the revitalization of Sardis would not be finished for over two hundred years.

Pompeii, 62 C.E.

Pompeii began as a small rural settlement before the foundation of the town proper sometime in the sixth century B.C.E. The city was founded by Greeks or Etruscans in the sixth century B.C.E.: the archaeological evidence does not support a clear answer as to who was more influential in its founding.\(^{327}\) The town was in Samnite control by the end of the fifth century and had become a formal Roman ally by 304 B.C.E.\(^{328}\) Pompeii remained loyal to Rome during the Second Punic War when many Campanian towns fought alongside Hannibal.\(^{329}\) The stability of the Italian peninsula under Roman hegemony in the second century B.C.E. led to a time of prosperity and construction activity in Pompeii.\(^{330}\) Discontent with Roman domination eventually made Pompeii rebel against Roman rule with other allied Italian cities in the Social War of the early first century B.C.E. In 89 B.C.E. Pompeii surrendered to Sulla following a siege of the town.\(^{331}\) In the year 80 B.C.E. Pompeii was made a colony for Sulla’s veterans: land was

\(^{327}\) Berry, Joanne, *The Complete Pompeii*, (Thames and Hudson, London, 2007), 72

\(^{328}\) Berry, *Complete Pompeii*, 78.

\(^{329}\) Ibid.

\(^{330}\) Berry, *Complete Pompeii*, 80.

\(^{331}\) Berry, *Complete Pompeii*, 84.
confiscated from its inhabitants and given to the veterans of Sulla’s army.\textsuperscript{332} The refounding of the city as a Roman colony brought big changes to the city. Buildings such as an amphitheater, theater, and an aqueduct were constructed in Pompeii to serve the needs of the increasingly Roman population.\textsuperscript{333} During the Augustan Age Pompeii was once again updated. The Forum was enlarged, new Temples were constructed, and civic buildings continued to be built. It was only in the early Imperial period that Pompeii became a “fully fledged urban center.”\textsuperscript{334} The town was hit with a destructive earthquake in 62 C.E. which damaged some buildings, destroyed others, and left some untouched.\textsuperscript{335} Pompeii’s repair and rebuilding was captured in progress by the eruption of Mt. Vesuvius which buried the town in volcanic ash in 79 C.E.

The earthquake of 62 C.E. affected Pompeii as well as Herculaneum, Nuceria, and Naples. Pompeii received the worst of the destruction in Campania: many public and private buildings were damaged severely, but others only received light damage. The disaster was not as devastating as the Sardis earthquake of 17 C.E. but still took its toll on the region. Seneca notes that people were afraid after the earthquake and decided to leave Campania to find safer ground.\textsuperscript{336} There are even two marble reliefs which depict the earthquake itself. They were found in the house of Lucius Caecilius Jucundus decorating his \textit{lararium}\textsuperscript{337}. One shows the Temple of Jupiter in the Forum as it seems to

\textsuperscript{332} Ibid.
\textsuperscript{333} Ibid.
\textsuperscript{334} Berry, \textit{Complete Pompeii}, 85.
\textsuperscript{335} The date of 62 is debated. For a discussion of the dating of this earthquake see: Guidoboni, \textit{Catalogue}, p. 199; Harry Hine, “The Date of the Campanian Earthquake: A.D. 62 or A.D. 63, or both?” \textit{L’Antiquite Classique} (1984): 266-269.
\textsuperscript{336} Seneca, 6.1.10.
\textsuperscript{337} The \textit{lararium} was a shrine to the household gods of each Roman family.
lean to one side in the midst of shaking. The other shows the Vesuvius Gate collapsing almost on top of two mules pulling a cart.\textsuperscript{338} The earthquake of 62 made an impact on the city of Pompeii for the years between 62 and 79C.E.

The literary sources do not mention any aid given to the cities of Campania to restore and rebuild their city immediately following the disaster. The only evidence of Imperial aid comes from Herculaneum 14 years later when the emperor Vespasian rebuilt the Temple of Mater Deum in the year 76C.E.\textsuperscript{339} Tacitus briefly mentions the Pompeii quake in \textit{Annals}: “an earthquake also largely demolished the populous Campanian town of Pompeii.”\textsuperscript{340} Tacitus mentions eight earthquakes in the \textit{Annals}.\textsuperscript{341} The earthquake in Naples in 64 caused the collapse of a theater where Nero had earlier performed but caused no injuries or further damage so there was no need for aid. Of the seven other earthquakes which Tacitus describes, he also mentions aid from Rome in five of them. He does not mention it for Pompeii in 62 or for Rome in 51. Of the earthquake in Laodicea, Phrygia in 60 he specifically notes that they rebuilt their town on their own, “without any subvention from Rome.”\textsuperscript{342} Tacitus was certainly aware that Imperial aid was a standard response to destructive earthquakes. His silence on the matter of Imperial aid for Pompeii is a strong indication that none was offered.

The other, more extensive, account of the Pompeii earthquake is that of Seneca in \textit{Natural Questions} Book 6. This paper has already examined Seneca’s account of the

\textsuperscript{338} Berry, \textit{Complete Pompeii}, 236.
\textsuperscript{339} CIL 10.1406.
\textsuperscript{340} Tacitus, \textit{Annals}, 15.22.1.
\textsuperscript{341} Sardis, 17C.E. 2.47.1-4; Asian Cibyra, and Achaian Aegium, 23 C.E. 4.13.1 (this may be one earthquake, but Guidoboni treats it as two in \textit{Catalogue}); Rome, 51 C.E. 12.43.1; Phrygian Apamea, 53 C.E. 12.58.2; Phrygian Laodicea, 60 C.E. 14.27.1; Pompeii, 62 C.E. 15.22.1; Naples, 64 C.E. 15.34.1.
\textsuperscript{342} Tacitus, \textit{Annals}, 14.27.1.
earthquake and he does not mention any Imperial aid. Seneca served as the tutor to a young Nero and as his advisor from 54 through 62 while Nero’s rule was generally considered competent. Although Seneca left the service of Nero in 62 and was later forced to commit suicide for allegedly conspiring against him, he had an intimate knowledge of imperial government and Nero and probably still had connections in the government. He would have known if Nero had offered any sort of aid to the Campanians and would have acknowledged it in *Natural Questions*. Seneca was in a position to know whether imperial aid had been extended to Pompeii and the other Campanian towns affected by this earthquake: his silence on the topic also points to the fact that Nero did not offer financial help or tax exemptions.

The traditional view, based on the literary sources as well as the archaeology, has been that the people and local government of Pompeii repaired and rebuilt their own city with their own resources. This view also stresses the idea that the earthquake caused an economic decline in Pompeii. This argument was first put forth by August Mau in the early twentieth century, expanded on by Amedeo Maiuri in the middle of that century and generally accepted thereafter. Individuals made decisions on rebuilding based on their ability to pay and the damage to their dwellings. The community repaired buildings that they deemed important-leisure facilities for the public and government buildings for the leaders. Many houses were abandoned or split up and used for businesses whose owners were wealthy. The ruined state of the Forum was seen as a strong indication that Pompeii

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was in an economic downturn and there was little hope of serious rebuilding, only provisional repair as needed and afforded.

A 1994 article by John Dobbins challenges this view, arguing that there was a unified, and monumental rebuilding effort underway, possibly with aid from the central government. Dobbins argues that the building by building approach that has been used to analyze the Forum is insufficient, and he analyzes the East end as a unified whole. He also argues that the ruined condition of the Forum, which has been an important aspect of the traditional view of economic decline, was not due to lack of repair. According to Dobbins the Forum was in poor condition because of damage from the Vesuvius eruption and related seismic activity, post-eruption salvage in antiquity, and hasty work by the early excavators.

Dobbins claim that there was a large scale rebuilding program underway at the time of the Vesuvius eruption seems plausible. He looks at the same evidence in a different way. The traditional view has seen incomplete rebuilding and inconsistent results across the spectrum of buildings at Pompeii after seventeen years as an indicator of economic decline. Dobbins focuses on houses that have been completely renovated as a sign that it was possible to rebuild dwellings and lives in this amount of time. While the traditional view holds that the decay of the Forum illustrates an economic slump, Dobbins’ argument is also sensible. The traditional view has been that the small number of public and religious buildings finished by 79 C.E. shows a community’s financial inability to restore its former glory. Dobbins argues that Pompeii was on its way not only to

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345 Ibid.
restoring its former glory, but improving upon it. Seventeen years was not an extremely long amount of time to rebuild a Roman town. Compared to a similar, but admittedly bigger disaster in Sardis, the incomplete work in seventeen years in understandable. Sardis, with the full financial and administrative backing of the Roman government, was only able to finish its main thoroughfare and water supply a full thirty years after its devastating earthquake!

The damaged state of the city does not mean that Pompeii was in economic distress. Both sides of this argument have merit and making this type of judgment solely on archaeological evidence is difficult at best. Dobbins’ claim that there may have been imperial aid lacks anything but circumstantial evidence. His more optimistic view about the state of Pompeii and its economy certainly seems to fit with the reconstruction timetable of Sardis less than fifty years earlier. The complex archaeological evidence has been used to bolster both sides of the argument, but any more of this debate is beyond the scope of this paper. One thing the archaeological evidence makes indisputably clear is that life in Pompeii was significantly interrupted by the earthquake of 62.

*Civic Buildings*

The archaeological evidence shows an inconsistent and slow pace of rebuilding in public civic buildings, public leisure amenities, utilities, private dwellings, and religious buildings. Civic buildings show some progress in repair: the east side of the Forum had largely been repaired, while the west side had not. The arches, portico, and pavement throughout the Forum had been moderately damaged in the earthquake. Some of the pavement had been repaired and part of the colonnade was finished and several statue
bases had been installed, but the Forum was not finished by the time of the earthquake.\textsuperscript{346} The Macellum was a public fish and meat market located on the east side of the Forum. It had received extensive damage to its walls, the internal colonnade and the stalls within. This building was completely renovated by the time of the eruption of Vesuvius. Not only had the walls and colonnade been repaired, but it had even been completely redecorated with plaster, stucco and marble.\textsuperscript{347} The Eumachia Building, whose function is unknown, was also situated on the east side of the Forum. It too suffered severe damage in the earthquake and it too had been completely renovated. The renovations consisted of rebuilt walls and door jambs, a totally new façade, repairs to the interior and complete re-decoration with stucco flaked with marble dust.\textsuperscript{348} The building known as the Comitium, possibly used for elections, had sustained some structural damage and damage to its entrances. Instead of being completely redone, this building had new marble pavement and wall relief, but some of the damaged entrances were simply closed off.\textsuperscript{349} Doors tend to be a weak point in a building during seismic activity because they lack the material strength of the rest of the wall.\textsuperscript{350} The Basilica, which was used for legal and business proceedings, had its entire roof collapse in on it. No repairs had apparently been started by the eruption of Vesuvius in 79.\textsuperscript{351} Three Municipal buildings, whose functions are not clear, had sustained light damage to the facades. These buildings were not only repaired but enlarged by approximately five feet. Two of the three

\textsuperscript{346} Berry, Complete, 238.
\textsuperscript{347} Ibid.
\textsuperscript{348} Ibid.
\textsuperscript{349} Ibid.
\textsuperscript{350} Guidoboni et al., Catalogue, 205.
\textsuperscript{351} Berry, Complete, 238.
buildings were waiting on marble revetments, but were almost finished.\textsuperscript{352} The civic buildings in and around the Forum had received some attention. By the time of the eruption in 79 some of the buildings had been completely redone, some had been started but not yet been finished, and still others had seemingly not been touched.

\textit{Leisure Facilities}

Public leisure facilities such as baths and entertainment venues while not totally finished by 79 showed a considerable amount of repair work. Baths were fundamental to the Roman daily urban existence. They allowed for personal hygiene and invigoration, and were a place for social and political interaction. Of the four bath complexes in Pompeii at the time of the eruption, three had been damaged, only one had been reopened to the public, but two others were nearly complete. The Forum Baths had been built initially following the re-founding of Pompeii as a Roman colony in 80 B.C.E. with public money.\textsuperscript{353} They only sustained minor damage in the earthquake and had been fully repaired, redecorated, and reopened to the public by 79.\textsuperscript{354} The Stabian Baths sustained moderate damage to the entrances, the attached palaestra, and some of the vaulted roofs. Most of this damage had been repaired, and much of the complex had already been redecorated, but the roofs were still damaged, and there was evidence of scaffolding in the palaestra.\textsuperscript{355} The Suburban Baths which were located just outside of the Marine Gate had been severely damaged. Some restoration work had been done, only to be damaged by further seismic activity, and repaired again. These Baths were being

\textsuperscript{352} Ibid.
\textsuperscript{353} Berry, \textit{Complete}, 152.
\textsuperscript{354} Berry, \textit{Complete}, 238.
\textsuperscript{355} Berry, \textit{Complete}, 238.
redecorated at the time of the eruption.\textsuperscript{356} The final bath complex, the Central Baths had only been started following the earthquake.

The amphitheater where 15,000 Pompeiians could watch gladiatorial combat and wild animal hunts is the oldest known permanent amphitheater in Italy. It was built at private expense shortly after 80 B.C.E.\textsuperscript{357} The amphitheater was partly built into the town walls and an artificial embankment, so it was less susceptible to earthquake damage than other buildings. During the earthquake some of the interior corridors were damaged as well as the top part of the \textit{cavea}, or seating. The top section of the \textit{cavea}, which had sustained damage, was rebuilt, the interior corridors were reinforced and the frescoes decorating the parapet had been redone. The amphitheater was operational and had been reopened by the time of the 79 eruption.\textsuperscript{358}

The large theater of Pompeii, which could seat four thousand people, had been built in the second century B.C.E. It had been extensively refurbished in time of Augustus at private expense by Marcus Holconius Rufus and his brother Marcus Holconius Celer.\textsuperscript{359} The \textit{cavea} of the theater had been damaged, as well as the architectural background known as the \textit{scaenae frons}. The lower section of seating had been repaired and some of the \textit{scaenae frons}, but the theater remained unfinished by the time of the eruption.\textsuperscript{360}

Pompeii also had a large public \textit{palaestra}, or exercise ground, which had been built in the Augustan Age. It had a swimming pool which received water from an aqueduct, and a portico on three sides. The earthquake damaged the walls and columns of the building.

\textsuperscript{356} Ibid.
\textsuperscript{357} Berry, \textit{Complete}, 146.
\textsuperscript{358} Berry, \textit{Complete}, 238.
\textsuperscript{359} Berry, \textit{Complete}, 136.
\textsuperscript{360} Berry, \textit{Complete}, 238.
and the water pipes supplying the swimming pool. The walls and columns had been partially repaired with bricks, but had not yet been covered with stucco.\textsuperscript{361} The swimming pool had not yet been reconnected to the water supply.\textsuperscript{362} Leisure facilities had not been completely repaired by 79, but most of them had had some renovations and had not been abandoned.

\textit{Utilities}

The swimming pool in the Large Palaestra had not been reconnected to the public water supply because the water supply system itself was still being repaired. Possibly from the middle of the fifth century B.C.E. Pompeii’s water had been supplied from an aqueduct. This was certainly the case from the Augustan period when a series of aqueducts had been constructed in the Campanian region.\textsuperscript{363} The water flowed from the aqueduct into a \textit{Castellum Aquae}, a large cistern which supplied the water throughout the city. The water went to the baths, to pools and decorative features in private houses (although it did not feed toilets or kitchens, which still used water from cisterns), and public fountains.\textsuperscript{364} The \textit{Castellum Aquae} sustained considerable damage and the water supply was interrupted throughout the city. The \textit{Castellum Aquae} had been almost completely repaired, but excavators are unsure if it was operational by the time of the eruption. The water pipes were probably repaired in an ad hoc fashion for immediate use focusing on public fountains first. There was a more unified effort to upgrade the system that was actually in progress in 79: the pipes leading from the \textit{Castellum Aquae} were

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\textsuperscript{361} Berry, \textit{Complete}, 238.
\textsuperscript{362} Ibid.
\textsuperscript{363} Berry, \textit{Complete}, 240.
\textsuperscript{364} Ibid.
\end{footnotesize}
being replaced, and there were open trenches along the Via dell’ Abbondanza with new pipes being installed.\textsuperscript{365} The supply had not been returned to any of the private houses.\textsuperscript{366}

\textit{Private Dwellings}

Private dwellings, like all other buildings in Pompeii experienced a range of damage that the owners dealt with in different ways. Some houses were severely damaged and could not be lived in, while others only received minor damages and the owners were merely inconvenienced with repairs. Some people abandoned their homes and the region entirely which Seneca noted in his \textit{Natural Questions}.\textsuperscript{367} Some houses had been completely renovated or were in the process of redecoration. The House of the Vettii had been completely rebuilt and redecorated prior to the 79 eruption.\textsuperscript{368} The House of the Vestals did not sustain any earthquake damage, but had been completely overhauled as a consequence of the disruption to the water supply.\textsuperscript{369} The House of the Chaste Lovers had been repaired and was in the process of being repainted. Some of the paintings were already finished, and a pile of lime on the floor shows that another fresco was to be worked on immediately-possibly even on the day of the eruption.\textsuperscript{370} The House of The Painters at Work is another house where work was proceeding on redecoration: this

\begin{footnotesize}
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\item\textsuperscript{365} Berry, \textit{Complete}, 240.
\item\textsuperscript{366} Ibid.
\item\textsuperscript{367} Seneca, 6.1.10.
\item\textsuperscript{368} Berry, \textit{Complete}, 242.
\item\textsuperscript{369} Berry, \textit{Complete}, 241.
\item\textsuperscript{370} Berry, \textit{Complete}, 240.
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house had amphorae full of lime, and a myriad of tools near a group of unfinished wall paintings.\footnote{Ibid.}

Some houses had begun restoration but these restorations had been abandoned at some point before 79. The House of the Colored Capitals had been broadly renovated, but eventually the marble veneers had been removed and the atrium and surrounding rooms had been abandoned.\footnote{Berry, Complete, 241.} The House of Amarantus contained mortar, limestone, and plaster as if repairs were taking place, but prior to 79 they had been ignored. Amphorae of wine had been stacked on top of the construction materials and “soil had accumulated over the wall plaster.”\footnote{Ibid.} Without more evidence it is unclear whether these repairs were neglected due to a poor economic situation in Pompeii, or something more mundane like an illness or death.

\textit{Temples}

Religious buildings also received renovations at an inconsistent pace. The Temple of Isis, where devotees worshipped the Egyptian Goddess associated with resurrection after death, was completely rebuilt and enlarged. A private benefactor, a six-year old boy, paid for the renovation of the temple. An inscription marks his work.\footnote{CIL 10.846 “Numerius Popidus Celsinus, son of Numerius, at his own expense completely rebuilt the Temple of Isis, which had collapsed in an earthquake. Although he was only six years old, the decurions elected him a member of their order without payment, because of his generosity”.} This was the only public temple completely renovated by the time of the eruption.\footnote{Numerous lararia, or household shrines to tutelary gods existed within private homes.} The tutelary goddess of Pompeii was Venus, and the Temple of Venus had been severely damaged during the earthquake. This temple was in the middle of renovation and enlargement by
79. It had been enlarged to the south, and a new terrace had been added to the southwest. Stocks of cut stone and marble indicate that work was ongoing at the time of the eruption.\textsuperscript{376} The temple known as the Temple of Vespasian or the Temple to the Genius of the Emperor was nearly complete by 79. It had sustained extensive damage to its perimeter walls and altar in the earthquake. The entire sanctuary had been rebuilt and was in the process of being redecorated by 79.\textsuperscript{377} One of the oldest Pompeian temples, the Temple of Apollo, had sustained damage to the \textit{cella} and colonnade. It had also received repair work, but six of its nine entrances to the Forum had simply been closed off.\textsuperscript{378} The Temple of Augustan Fortune had been badly damaged, but only the \textit{cella} had been repaired by the time of the eruption.\textsuperscript{379} Temples and religious sanctuaries seem to have been repaired at the same rate as other public buildings. There is only one undisputed example of private financing for the rebuilding of a temple, but repairs were ongoing at many of the other religious buildings throughout the city.\textsuperscript{380}

The earthquake at Pompeii did not raze the city to the ground as happened at Sardis, but it caused considerable damage and interfered with the life of the city for the remainder of its existence. The damage was heavy in some buildings and minor in others. Civic buildings, leisure facilities, the water supply, private houses and religious buildings were all affected. Buildings were repaired and rebuilt but life was certainly altered for the years between the earthquake of 62 and the volcanic eruption of 79.

\begin{footnotesize}
\begin{enumerate}
\item[Berry, Complete, 238.]
\item[ibid.]
\item[Ibid.]
\item[Ibid.]
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\item[Berry, Complete, 238.]
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\end{footnotesize}
The archaeological evidence at Sardis and Pompeii illustrate the duration of the
disruption to the life of a city devastated by an earthquake. Sardis was almost completely
obliterated by the 17 C.E. earthquake that damaged a large swath of western Asia Minor.
The emperor Tiberius offered substantial monetary relief as well as expertise in planning
and rebuilding the city’s public spaces. Even with this ample relief, residents were forced
to live in emergency housing for up to three generations, the main thoroughfare and
aqueduct were not completed for over three decades, and the grand plan of the city was
not fully realized for two hundred years! The earthquake which struck Pompeii in 62
C.E. did not do nearly as much damage to that city as the earthquake which destroyed
Sardis. Even so, cleaning and repairing the damage to public and private buildings was a
protracted process that shows the impact an earthquake could have on a Roman city.
CHAPTER 6: CONCLUSIONS

This paper has surveyed the ways in which affected populations and emperors responded to earthquakes. The popular response could be instinctive, positive, negative, passive or active. The actions remained nearly identical from pagan times through Christian times. Individuals and communities took proactive roles by rebuilding on their own and by sending embassies to the central government to petition for aid. These petitions for aid were often successful and show that survivors had some agency. The spectrum of popular response was based on necessity and human nature. Some chose to respond in passive or negative ways, others chose to participate in rebuilding their communities and their lives. The emperors, from Augustus through Justinian, often responded in helpful, generous ways. Why did such dissimilar rulers respond so similarly over many centuries?

Reasons for Imperial Response

While it is impossible to ever really know why someone acted in a particular manner there are several probable reasons why emperors regularly chose to aid earthquake victims. As patrons of the empire, emperors aiding earthquake victims were participating in the Roman tradition of euergetism. They followed a precedent set by the first and arguably most influential emperor, Augustus. Earthquake relief showcased imperial philanthropy in a very pragmatic manner. Popular religious attitudes toward earthquakes also affected the ways in which emperors responded. The typical response to earthquakes was the same for pagan and Christian emperors: the advent of Christianity only affected their response in minor ways.

Practical Euergetism

Offering tax relief and paying for the construction (or reconstruction) of public buildings was at its simplest a form of imperial euergetism. Roman euergetism was an act of "senator, emperor or mere local notable…who helped the community out of his own pocket, a patron of public life." Roman euergetism was derived from Greek and Hellenistic euergetism, Greek for "good works," which had its own origins in the middle of the fourth century B.C.E. combining patronage, political largesse and funerary liberalities. A wealthy Roman who wished to be well known would spend lavish amounts of money on public spectacles or on constructing buildings or utilities for public use. This was different from mere patronage because it was not just his clients that benefitted, but the public in general. Euergetism began as a rich man’s voluntary contribution for the public good which doubled as a public display of wealth.

Some elected offices and honors “morally or even legally” obligated the holder to provide benefactions. This obligatory euergetism evolved from voluntary euergetism but came to be expected of those elected to certain public offices. In Roman politics this period of onerous benefaction was usually followed by time “in the provinces to replenish the coffers.” Local elites in provincial towns were also expected to provide generous benefactions on election to their councils, but they were not rewarded with the chance to recoup their losses. Following the reorganization of the central government under Diocletian in the late third century local council members, or curiales, were

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382 Veyne, Bread and Circuses, 11.
383 Veyne, Bread and Circuses, 85.
384 Veyne, Bread and Circuses, 85.
385 Veyne, Bread and Circuses, 11.
expected to assume even more fiscally burdensome duties. Throughout late antiquity the curiales tried to avoid these obligations and they entered the imperial bureaucracy or the Church in what has been called the “flight of the curiales.” They felt they could no longer afford these compulsory benefactions and this local type of euergetism dramatically decreased.

Augustus, as the first Roman Emperor, was the first to offer aid to cities damaged by earthquakes. He helped rebuild Tralles on the island of Chios in 27 B.C.E. He also helped victims of a 17 B.C.E. quake at Paphos on the island of Cyprus, and rebuilt Naples just before 2 B.C.E. For Augustus these were acts of voluntary euergetism. He mentioned them in the Res Gestae when he listed these and other traditional euergesiai:

Vast sums of money were spent on theatrical events, gladiatorial games, athletics, hunting and mock sea battles, not to mention that given to colonies in Italy, to towns in the provinces which had been destroyed by earthquakes or fire, and to individual friends and senators whose census he had completed.

As princeps senatus, first man of the senate, Augustus had done these things in the typical way any notable Roman might have throughout Republican times. Despite his title, Augustus was not just another senator, in practice he was a monarch, the first Emperor of Rome. His actions had an effect on his successors, who followed his example in many respects.

Ensuing emperors followed Augustus in providing relief for victims of seismic disasters. While describing Tiberius’ aid to the Asian cities affected by the earthquake of

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388 Tralles: Strabo 12.8.18; Paphos: Dio Cassius, 54.23.7; Naples: Dio Cassius, 55.10.9.
389 For distinction between voluntary and obligatory euergetism, see Veyne, 10-11.
17 C.E. Strabo writes that Tiberius “contributed money for their restoration, just as his father [Augustus] had done in earlier times…” Augustus’ immediate successor had seen an occasion to directly emulate his philanthropy. As subsequent emperors continued to follow his example it came to be expected of the position. Augustus’ voluntary acts of euergetism “became public tasks… (and) in this way the historic list of the state’s traditional tasks was lengthened.” Not every earthquake or natural disaster received imperial aid, so petitions for aid remained important factors, and the emperor’s decision retained an aspect of personal philanthropy. Even though helping victims of disasters became a “public task,” aid was never a foregone conclusion and communities needed to retain some agency. Because aid was not automatic emperors could still take some personal pride in their role, and the public was still thankful enough to honor his liberality.

Providing earthquake relief was beneficial for the Roman state on several levels. The primary advantage for the central government was that it demonstrated imperial concern for its subjects. In an empire where the state was often mainly associated with tax collectors, disaster relief showed a different, caring side of the government. This “public task” was a smart political maneuver. The individual emperor still received credit for being philanthropic, the victims were better able to rebuild their cities and their lives and return to economic productivity (contributing to the taxes of the empire).

Offering tax relief was a practical political maneuver because it was relatively easy for the emperor, beneficial to the subjects, and beneficial for the image of the emperor. A

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391 Strabo, 12.8.18.
392 Veyne, Bread and Circuses, 359.
tax exemption offered a substantial lessening of financial burden to subjects and cities and aroused great appreciation for the emperor. The ramifications for the earthquake victims could be considerable, while the impact to the central government could remain minimal. Providing shelter for the homeless and creating construction jobs that might offer employment and would certainly stimulate the local economy helped those living in a damaged region. The emperor could perform this beneficial act for these subjects without negatively impacting the treasury: he simply increased taxes in another province or provinces to make up the difference.

Construction projects were also practical because they did not require sending vast sums of money across the empire. The governor of a province, with the permission of the emperor, took money from the provincial coffers before it was sent to Rome. The governor then used that money to pay for materials, planning and labor. The money never made it to the imperial treasury, but came from the tax revenue of the province itself. The emperor could account for the money that was not remitted by the province and he received the gratitude of the survivors. This was not as fiscally or logistically difficult as it would have been if the emperor had needed to physically send the money from Rome or Constantinople to Sardis or Antioch. Because of this fact the risks were only moderate but the rewards for both the affected town and the emperor’s reputation were substantial.

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393 Veyne, *Bread and Circuses*, 359.
394 Veyne, *Bread and Circuses*, 360.
Rebuilding damaged or destroyed cities demonstrated an emperor’s goodwill. These philanthropic monuments helped the city and subjects return to their accustomed daily lives and illustrated the benevolence of their ruler. The buildings and facilities paid for by the emperor’s decision to help were a lasting symbol of the concern that the government had for its subjects. Subjects were reminded that their tax payments did serve a purpose and that the central government, while possibly geographically distant, considered their well-being important.

Reconstructed buildings also symbolized the power of the state. Large scale reconstruction projects “demonstrated that the sovereign could accomplish what private individuals never could.”396 The state was able to command the resources to reconstruct entire cities, as in the case of Sardis, and these buildings provided the subjects with an impressive reminder that their government could accomplish whatever goal it set for itself.

These buildings also symbolized the presence of the state in distant locales. They were constant reminders that the authorities in Rome were only an embassy away if help was needed, and that they were just as close if an area felt any impulse to disregard imperial policies or taxes. Reconstruction on large and moderate scales was able to symbolize at once the philanthropy, power and authoritative proximity of the central Roman government.

396 Veyne, Bread and Circuses, 365.
Understanding Popular Religious Attitudes

An emperor’s decision to aid earthquake victims also took into account popular religious attitudes towards earthquakes. While many Romans knew of rational explanations for earthquakes, popular notions often focused on perceived religious connections. Pagans throughout the imperial period believed that an earthquake could be a prodigy which illustrated a break in the *pax deorum*, or peace of the gods. Christians in the later empire attributed earthquakes to God’s anger with humanity. Emperors acted to relieve distress from earthquakes in part to divert attention from the supposed supernatural catastrophe that had befallen his subjects. This desire to focus popular reaction on imperial generosity rather than divine displeasure was another reason pagan and Christian emperors consistently aided earthquake plagued cities.

Pagans in the Republic considered earthquakes a manifestation of a break in Roman harmony with the divine, but official recognition of prodigies did not mesh well with imperial ideology. Emperors were supposed to have the support of the divine. They were seen to be “eminently and continuously pious, and in permanent favor with the gods.”397 If an unusual event were to be accepted as a prodigy the disharmony in the *pax deorum* would certainly reflect on the ability of the emperor. Unusual events did not stop but the advent of the Empire ended their official status as prodigies. Mary Beard observes that “traditional systematic reporting of prodigies…had disappeared in the Augustan period: these seemingly random intrusions of divine displeasure must have appeared incongruous in a system where divine favor flowed through the emperor.”398

398 Beard et al., *Religions of Rome*, p. 252.
The emperor, by focusing attention on his generosity in the face of disaster, diverted speculation on why the gods were angry with him. The only power possibly stronger than the imperial government was the power of the gods. By enabling citizens to reflect on the philanthropy and power of the central government rather than the gods’ discontent with it, emperors retained popular favor just as they were seen to retain divine favor.399

Christian Emperors needed to understand and respond to popular religious attitudes on earthquakes as well. Christians thought that earthquakes and other natural disasters were caused by God’s wrath. Anger with humanity’s behavior forced God to punish people living within the Empire. Early Christian emperors might have offered relief from these disasters in order to divert attention from God’s anger as the pagan emperors did, but as the Roman Empire became increasingly Christianized that response would not have had the same effect. Christian Emperors shared the same general belief in Christ and God, and trying to deflect ideas about God’s wrath would have caused popular anger. As Christian imperial ideology developed Christian Emperors cast themselves as God’s “vicar on earth.”400 Offering aid after the wrath of God, playing the good cop to God’s bad cop, the emperor became the “embodiment of God’s mercy on earth.”401 The emperor’s philanthropy was an expression of how God would treat everyone if they did not keep making Him so angry. This representation of himself allowed the emperor to show God’s compassion through his own actions. Some of the glory was reflected onto

399 Cf. Jason Davies’ argument concerning the decreasing importance of prodigies in Tacitus’ account of the early Empire. Davies, Rome’s Religious History, ch. 4.
the emperor, although as always, it was through God’s mercy. Politically, the outcome was the same as in pagan times. The emperor was not blamed for God’s destruction, but he received the accolades for helping those in need. The religious issue was not suppressed as it had been by pagan emperors, but the Christian emperor showed his connection to God by working with Him.

**Differences between Pagan and Christian Imperial Response**

Imperial response to earthquakes remained consistent from Augustus’ long term as *princeps senatus* through Justinian’s pious reign. The basics of the response were the same for pagan and Christian emperors. The main difference was that Christian emperors were described outwardly displaying feelings of humility and mourning. Theodosius processed barefoot alongside the senate, clergy and population after Nicomedia, Bithynia was “razed to the ground and flooded by the sea” due to an earthquake in 447.\(^{402}\) Justinian could only dress in dirty rags and weep after the 526 Antioch earthquake, and he refused to wear a crown as a show of humility after the Constantinople earthquake of 557.\(^{403}\) These shows of humility and mourning were not matched by the earlier pagan emperors. This action which may have been taken as a sign of weakness in the earlier Empire showed the Christian population of the later Empire that the emperor was a pious man who cared about human lives and suffering. This is the one difference that Christianity made concerning imperial response to earthquakes in antiquity. The types of practical response were the same: tax exemptions, money for reconstruction, financial

\(^{402}\) Malalas, 363.

\(^{403}\) 526: Cedrenus, 640; 557: Malalas, 490.
assistance for survivors, and commissions to oversee relief, but the public and private display of mourning and humility were unique to Christian emperors.

Implications for Imperial Power

The early emperors’ response to earthquakes illustrates imperial ability to rule over an enormous geographical distance without “an imperial administration that matched the dimensions of the empire.”\(^{404}\) Even though a large part of governing the empire was delegated to local aristocrats, the emperor managed to reinforce his ultimate responsibility by offering help to those subjects whose lives had been devastated by these natural disasters. The cycle of petition and response which allowed provinces, cities and towns to have nearly direct access to, and timely reply from the emperor kept subjects satisfied with the level of imperial concern for their well-being.\(^{405}\) The emperor and his subjects realized that one of his main roles was to listen to requests from them and help them when they needed it.\(^{406}\) The response to earthquakes and other disasters not only fulfilled this function but showcased imperial empathy, power, and presence throughout the vast empire while relying on minimal governmental bureaucracy.

The continuity of response into the later Roman Empire shows the emperor retaining some personal power despite the burgeoning government of the time period. Christopher Kelly argues that the expanding imperial bureaucracy made “autocratic independence…more difficult to maintain.”\(^{407}\) In other words, the more administration

\(^{405}\) Millar, The Emperor, 6.
\(^{406}\) Millar, The Emperor, 7.
\(^{407}\) Christopher Kelly, Ruling the Later Roman Empire, (Cambridge, MA: Harvard University Press, 2006), 192.
that the emperor delegated to his subordinates, the less independent power he maintained. Emperors needed to consistently remind their officials that behind all the rules and regulations, the emperor was still the ultimate authority. Responding to requests for earthquake relief allowed the emperor to maintain his control in reality and in the view of his subjects. The tax exemptions, money for reconstruction, and appointed overseers did not come from the decision of an administrator somewhere along the line, but directly from the emperor himself. He made the decision and he received the accolades. The transition from “soft” to “hard” government had wide ranging effects for the emperor and his subjects, but emperors did not relinquish all power, especially power that was philanthropically and politically expedient.  

Implications concerning Christianization

While the conversion of the Roman Empire to Christianity had a significant impact on Western Civilization through its moral and religious legacy, it had little effect on how emperors dealt with earthquakes. The practical response was generally the same, and the actions that did change were minor. Politically, the response needed to stay consistent, and religious changes were mainly personal shows of piety that did not affect the pragmatic response. Ramsay MacMullen argues that Christianity made little difference to “broad patterns of secular life” except in the realm of manners and morality. The humanitarian reactions were the same as well: while Christianity made concern for the dispossessed and poor “a dramatic component of the Christian representation of the

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bishop’s authority in the community,⁴¹⁰ emperors had been concerned with those
displaced by earthquakes and other disasters for centuries. While it is difficult to know
how much earlier emperors were concerned with politics in relation to humanitarian
concerns, the same is true for the Christian emperors. Whether they had humanitarian
issues in mind or not, the emperors of Rome, from Augustus to Justinian, responded to
earthquakes in a nearly identical manner for half a millennium.

⁴¹⁰ Brown, Power and Persuasion in Late Antiquity, 96.


