

Salus Patriae: Public Health and the Roman State

Caroline Garrahan Wazer

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## ABSTRACT

### Salus Patriae: Public Health and the Roman State

Caroline Wazer

The Romans had a term for public health, *salus publica*, which was frequently invoked in a political context, but the concept is rarely discussed in historical studies of Roman political ideology, medicine, or infrastructure. This dissertation offers a diachronic analysis of the development of the term from the middle Republic to the beginning of the third century CE using four case studies: Senatorial responses to epidemic disease, the construction of aqueducts, the state recognition of medical authorities, and the healthcare of the military. While medical theory and hydraulic technology are relevant throughout, in each case changes in the abstract and concrete meaning of *salus publica* are more closely tied to broader political and social changes including the expansion of the empire, the self-presentation of the emperor, and the role of the individual citizen in the Roman state.

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## Introduction

### **I. What Roman public health?**

Over the four years it has taken to write this dissertation, I have encountered the term “Roman public health” almost exclusively in publications written by and for public health practitioners. Graduate programs in public health generally require an introductory course that covers the history and methodologies of modern Western public health, and textbooks used in these classes invariably devote a page or two to describing the public health of the Classical world. Below, I reproduce an excerpt from one especially popular such textbook.<sup>1</sup>

Ancient Rome adopted much of the Greek philosophy and experience concerning health matters, with high levels of achievement and new innovations in the development of public health. The Romans were extremely skilled in engineering of water supply, sewerage and drainage systems, public baths and latrines, and medical care. Roman law also regulated businesses and medical practice. The influence of the Roman Empire resulted in the transfer of these ideas throughout much of Europe and the Middle East. Rome itself had access to clean water via 10 aqueducts supplying ample water for the citizens. Rome also built public drains. By the early first century BCE, the aqueducts made available 600-900 liters per person per day of household water from mountains. Marshlands were drained to reduce endemic malaria. Public baths were built to serve the poor, and fountains were built in private homes for the wealthy. Streets were paved, and organized garbage

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<sup>1</sup> Now in its third edition, the textbook has been translated into seven languages, and according to the authors “is used not only in introductory courses in public health at bachelor’s and master’s levels but also as a general review for PhD students coming to public health from different disciplines, in North America, Europe, and many other countries. It has also been frequently recommended for use as a desk reference for practitioners.”

disposal served the cities... Rome made important contributions to the public health tradition of sanitation, urban planning, and organized medical care.<sup>2</sup>

This narrative is distilled from the chapter on Greece and Rome in George Rosen's 1958 *A History of Public Health*, which is the only source that covers antiquity mentioned in the textbook's references. Rosen was a physician and not a historian by training (like many authors of histories of public health and medicine who published in the mid-twentieth century and earlier) and made some factual errors, although he was overall very careful and nuanced in his treatment of historical sources.<sup>3</sup>

More importantly in terms of this dissertation, however, is the ahistoricism of this sort of survey of Roman public health. The above passage is written almost entirely in the passive voice: "Streets were paved, and organized garbage disposal served the cities." When the voice is active, the subject is not any individual human actor or organization but rather just "Rome." This removal of human agency from action taken in the name of health becomes even more obvious in a timeline at the end of the chapter on the history of public health, which condenses a thousand years of Roman history, 500 BCE - 500 CE, to one bullet point that does not attempt to provide any political, cultural, or social context to the phenomena mentioned, nor to fit them into a chronology:

**500 BCE - 500 CE: Rome** - aqueducts, baths, sanitation, municipal planning, and sanitation services, public baths, municipal doctors, military, and occupational health

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<sup>2</sup> Tulchinsky and Varavikova 2014, 4.

<sup>3</sup> Rosen and his narrative are discussed in further detail later in this chapter.

For aspiring public health practitioners who plan to focus on practical endeavors targeting living people in the modern world, such a simplified and synchronic version of Roman public health does not pose any real problems: the authors of the textbook do not make any factually untrue claims, and ultimately an advanced understanding of historiographical standards is not necessary for on-the-ground public health work.

For students and readers interested in a more nuanced and historical treatment of public health in ancient Rome, however, more advanced narratives are difficult to come by. A number of aspects that make up the component parts of public health — e.g., demography, sanitation, and medicine — have long been part of academic Roman history and are the subjects of increasingly innovative scholarship. They are, however, by and large kept segregated from each other and not integrated into a broader narrative. In fact, the term “public health” appears very rarely in the work of Roman historians. Perhaps the most widely cited piece of scholarship that uses the term positively is a 1980 paper by John Scarborough titled “Roman Medicine and Public Health.”<sup>4</sup> Responding to this paper in 2002, Vivian Nutton correctly pointed out that there was “little or no connection between the practitioners of ancient medicine and public health” due to the overwhelmingly individual and private nature of ancient medicine.<sup>5</sup> He continues, “Besides, questions of public health, of sewers, aqueducts, the removal of market rubbish, plague control, quarantine and the like are questions of political and social control.”<sup>6</sup>

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<sup>4</sup> Scarborough 1980.

<sup>5</sup> Regarding the individual nature of Roman medicine, see the introduction to Chapter 2 below.

<sup>6</sup> Nutton 2002, 70-71.

Nutton is certainly correct that public health is intrinsically a political and social question that engages with technology and medicine but is not defined by that engagement alone. The definition of public health adopted by the World Health Organization in 1988 characterizes it as “the art and science of preventing disease, prolonging life and promoting health *through the organized efforts of society*.”<sup>7</sup>

Did the Romans have a conception of the promotion of collective health as one function of society? A letter that Pliny the Younger wrote to the emperor Trajan in 112 CE is clear evidence that, at the very least, one member of the imperial government at one particular historical moment could soberly propose an expensive public works project far from the empire’s capital on the basis that it would improve the collective health of Roman citizens and subjects.

Among the chief features of Amastris, Sir, (a city which is well built and laid out) is a long street of great beauty. Throughout the length of this, however, there runs what is called a stream, but is in fact a filthy sewer, a disgusting eyesore which gives off a pestilential stench. The health and appearance alike of the city will benefit if it is covered in, and with your permission this shall be done. I will see that money is not lacking for a large-scale work of such importance.<sup>8</sup>

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<sup>7</sup> Acheson, 1988; emphasis mine.

<sup>8</sup> Pliny the Younger, *Ep.* 10.98: “Amastrianorum civitas, domine, et elegans et ornata habet inter praecipua opera pulcherrimam eandemque longissimam plateam; cuius a latere per spatium omne porrigitur nomine quidem flumen, re vera cloaca foedissima, ac sicut turpis immundissimo adspectu, ita pestilens odore taeterrimo. Quibus ex causis non minus salubritatis quam decoris interest eam contegi; quod fiet si permiseris curantibus nobis, ne desit quoque pecunia operi tam magno quam necessario.” This and all following translations of Pliny the Younger are adapted from that of Betty Radice.

The adjective describing the stench of the sewage channel, *pestilens*, is explicitly medical, if sometimes used metaphorically.<sup>9</sup> Furthermore, Pliny's understanding of the way in which the sewer harmed the collective health in Amastris is a clear example of the ancient medical theory of miasma, which prevailed until the nineteenth century.<sup>10</sup> Pliny provides a more substantial piece of evidence for his understanding of health as being influenced by environmental factors including air quality in *Ep.* 5.6.1-2, in which he explains to a worried friend that the location of his summer villa in Tuscany is exceptionally healthy.<sup>11</sup> Here and in several other letters to Trajan, Pliny — who was, crucially, not a physician — brought a medical concept into a political sphere in order to attempt to solve what he understood to be a collective health problem.<sup>12</sup>

Pliny was not the only Roman official to use public health as a justification for government action. The imperial *curator aquarum* Frontinus, who served under Nerva, was tasked with the politically unpleasant duty of cracking down on the unlicensed siphoning of public water from aqueduct streams. While tapping into a public aqueduct was not particularly difficult to do and the culprits likely crossed divisions of class, in the second half of the first century CE the blame was pinned on wealthy Romans who allegedly used

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<sup>9</sup> Pliny uses the same word literally at *Plin. Ep.* 5.6.2 and figuratively at *Ep.* 7.27.5.

<sup>10</sup> The great British sanitarian Edwin Chadwick in 1846 famously claimed “All smell is disease” when he proposed a public works project in London that was quite similar to Pliny's in Amastris.

<sup>11</sup> Pliny, *Ep.* 5.6.1-2: “Amavi curam et sollicitudinem tuam, quod cum audisses me aestate Tuscos meos petiturum, ne facerem suasisti, dum putas insalubres. Est sane gravis et pestilens ora Tuscorum, quae per litusextenditur; sed hi procul a mari recesserunt, quin etiam Appennino saluberrimo montium subiacent.”

<sup>12</sup> This and other letters are discussed in Chapter 3 below.

the pirated water to supply the fountains and baths of their suburban villas. Such theft was framed in moral terms: Pliny the Elder complained that the culprits literally “diverted public health” away from the capital.<sup>13</sup> Frontinus’ *De Aquaeductu*, in addition to being a seminal source for the state of Rome’s aqueduct system in the early empire, can therefore also be read as a political text targeted at these water pirates, appealing to their sense of patriotic duty and warning them that their days of unregulated water usage were about to end.<sup>14</sup> The first sentence of the *De Aquaeductu* lays out the basic tenets of Frontinus’ appeal, serving as a carefully hedged apology for his audit of water usage:

Inasmuch as every task assigned by the Emperor demands especial attention; and inasmuch as I am incited, not merely to diligence, but also to devotion, when any matter is entrusted to me, be it as a consequence of my natural sense of responsibility or of my fidelity; and inasmuch as Nerva Augustus (an emperor of whom I am at a loss to say whether he devotes more industry or love to the State) has laid upon me the duties of water commissioner, an office which concerns not merely the convenience but also the health and even the safety of the City, and which has always been administered by the most eminent men of our State...<sup>15</sup>

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<sup>13</sup> Pliny the Elder, *Natural History* 31.25.42: “quamquam utriusque [sc. the Aqua Virgo and the Aqua Marcia] iam pridem urbi perit voluptas, ambitione avaritiaque in villas ac suburban detorquentibus publicam salutem.”

<sup>14</sup> Peachin 2004.

<sup>15</sup> Frontinus, *De Aquaeductu* 1: “Cum omnis res ab imperatore delegata intentiorem exigit curam, et me seu naturalis sollicitudo seu fides sedula non ad diligentiam modo verum ad amorem quoque commissae rei instigent sitque nunc mihi ab Nerva Augusto, nescio diligentiore an amantiore rei publicae imperatore, aquarum iniunctum officium ad usum, tum ad salubritatem atque etiam securitatem urbis pertinens, administratum per principes semper civitatis nostrae viros...” This and all following Frontinus translations are adapted from that of Charles E. Bennett.

First, Frontinus emphasizes that his actions are the result of direct orders from the new emperor, who, he clarifies, only has the best interests of the Roman state at heart.<sup>16</sup> The water supply, he continues, is essential to the wellbeing of the residents of the capital because it brings health (*salubritatem*) and safety (*securitatem*). Frontinus repeatedly refers to the healthfulness of water throughout the text.<sup>17</sup> At I.11.1, a negative example again calls attention to his personal preoccupation with collective, public *salubritas*:

I fail to see what motive induced Augustus, a most sagacious sovereign, to bring in the Alsietinian water, also called Augusta. For this has nothing to commend it,—is in fact positively unwholesome, and for that reason is nowhere delivered for consumption by the people. It may have been that when Augustus began the construction of his Naumachia, he brought this water in a special conduit, in order after the founding not to encroach on the existing supply of wholesome water, and then granted the surplus of the Naumachia to the adjacent gardens and to private users for irrigation.<sup>18</sup>

Here, Frontinus implies that aqueducts are so intrinsically connected with health that he is baffled as to why an emperor as wise as Augustus would bother to introduce water into the city that was not healthy (*parum salubrem*). Indeed, the only rationale Frontinus can imagine for the Aqua Alsietina is that Augustus, when he decided to build his Naumachia (a

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<sup>16</sup> On defining the Roman state, see the end of this chapter.

<sup>17</sup> Frontinus *De Aquaeductu* 2.88: “Sentit hanc curam imperatoris piissimi Nervae principis sui regina et domina orbis in dies et magis sentiet salubritas eiusdem aucto castellorum, operum, munerum et lacuum numero”; at 2.92, Frontinus describes how Nerva reorganized the aqueduct system so that the Marcia, which is the healthiest, is devoted to drinking water.

<sup>18</sup> Frontinus *De Aquaeductu* 1.11: “Quae ratio moverit Augustum, providentissimum principem, perducendi Alsietinam aquam, quae vocatur Augusta, non satis perspicio, nullius gratiae, immo etiam parum salubrem ideoque nusquam in usus populi fluentem; nisi forte cum opus Naumachiae adgrederetur, ne quid salubrioribus aquis detraheret, hanc proprio opere perduxit et quod Naumachiae coeperat superesse, hortis adiacentibus et privatorum usibus ad inrigandum concessit.”



sort of aquatic arena for mock sea battles), could not bring himself to waste healthy drinking water on something that existed solely for pleasure. Although, as Frontinus himself reports, water from even the “healthier” aqueducts like the Aqua Marcia had long been used for such diverse purposes as decorative fountains and baths, the fundamental characteristic of, and political rationale justifying the expense of, the Roman aqueduct system as described in the *De Aquaeductu* is that it made the city healthier.

Frontinus’ political context must be kept in mind: in light of Roman political mores, any associations of the aqueducts with luxury would make his job defending them more difficult. *Salubritas*, and in particular the collective *salubritas* of the city, therefore serves as his defense for the aqueduct system as a whole. This suggests that Frontinus saw *salubritas* as a kind of moral trump card, something that might serve to shame water pirates into ending their use of public water when the mere illegality of the practice had failed to do so. Furthermore, his repeated admiring references to the special interest of Nerva in this project suggest that a concern for urban *salubritas* is a fundamental characteristic of a good emperor. Nerva’s beneficence, Frontinus claims, has directly and tangibly improved public health:

The effect of this care displayed by the Emperor Nerva, most patriotic of rulers, is felt from day to day by the present queen and empress of the world; and will be felt still more in the improved health of the city, as a result of the increase in the number of the works, reservoirs, fountains, and water-basins. No less advantage accrues also to private consumers from the increase in number of the Emperor’s private grants; those also who with fear drew water unlawfully, now free from care, draw their supply by grant from the sovereign. Not even the wastewater is lost; the appearance of the City is clean and altered; the air is purer; and the causes of the unwholesome

atmosphere, which gave the air of the City so bad a name with the ancients, are now removed...<sup>19</sup>

While Roman physicians may not have concerned themselves with public health, Pliny's letter to Trajan and Frontinus' justification for punishing water pirates are two pieces of evidence that make it clear that certain members of the imperial government not only concerned themselves with medical theory, but actively advocated for state-funded projects that they believed would improve the collective health of some group of residents of the Roman empire.

Both elite Romans of the late first and early second centuries CE, Pliny and Frontinus lived in a world in which a degree of medical knowledge was to be expected for educated men of their status.<sup>20</sup> Some version of this attitude dates to at least the time of Cato the Elder, who argued that a *paterfamilias* should manage the health of his own household rather than entrusting that duty to a foreign doctor.<sup>21</sup> From Cato's perspective, the growth of Greek professional medicine in Italy literally put the Roman state at risk because it gave young citizens the impression that educating themselves about health and

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<sup>19</sup> Frontinus *De Aquaeductu* 2.88: "Sentit hanc curam imperatoris piissimi Nervae principis sui regina et domina orbis in dies et magis sentiet salubritas eiusdem aucto castellorum, operum, munerum et lacuum numero. Nec minus ad privatos commodum ex incremento beneficiorum eius diffunditur; illi quoque qui timidi incitum aquam ducebant, securi nunc ex beneficiis fruuntur. Ne pereuntes quidem aquae otiosae sunt: alia munditiarum facies, purior spiritus, et causae gravioris caeli quibus apud veteres urbis infamis aer fuit, sunt remotae..."

<sup>20</sup> Wallace Hadrill 2008, 182-83. Celsus, writing earlier in the first century CE, serves as a case in point: likely not a practicing physician himself because he was of such high rank, Celsus nevertheless educated himself enough about health and disease to write one of the most authoritative surviving Latin medical texts.

<sup>21</sup> Pliny the Elder, *NH* 29.6.13-8.16.

medicine was unnecessary. This willing ignorance, he warned, compelled Romans to put their lives in the hands of non-citizen Greek émigrés and, even worse, slaves. Originally from the conquered East and harboring resentment toward their Roman masters, Cato's imaginary doctors would gain politically from the deaths of their patients and the subsequent weakening of Roman manpower.<sup>22</sup>

Cato's paranoid warning about the danger that Greek doctors posed to the Roman state has been preserved in the historical record because Pliny the Elder approvingly cited it in one of the ten chapters on medicine in his *Natural History*, the encyclopedia that he dedicated to the emperor Titus. It was only a few decades later that Frontinus and Pliny the Younger (the Elder's own nephew) petitioned for positive political action in the interest of public health. Although the *Natural History*, Pliny's letters to Trajan, and Frontinus's *De Aquaeductu* focus on different aspects of public health (respectively, medicine, sanitation, and aqueducts), their rough contemporaneity hints at the importance and complexity of public health in elite Roman discourse at the end of the first century CE. But how far back in Roman history do these aspects of the discourse find their first articulation and how did they change over time? This dissertation attempts to identify the major components of Roman political discussions of public health, and to trace them diachronically as they were influenced by (and influenced in turn) Roman political and historical circumstance.

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<sup>22</sup> Pliny the Elder, *NH* 24.1, 25.1.

## II. The historiography of public health

### *a. The Sanitarians*

Despite the importance of health in Roman political discourse, in recent decades scholars have been reluctant to discuss a Roman “public health” as such — that is, the ways in which ideas about collective health and disease informed the policies and priorities of the Roman government. This has not always been the case. To the pioneers of sanitary engineering in the Western world, Rome was a paragon of public health and was presented as such in many arenas. In an 1850 editorial article summarizing Edwin Chadwick's recent “Report of the Sanitary Commission to Parliament,” the *Edinburgh Review* cited ancient Rome as the supreme example of a state that cared about the health of its citizens:

With them nothing seems to have been deemed “common or unclean” that could protect the public health. We find Pliny writing to Trajan about a fetid stream passing through Amastris, as if it were an affair of State. The cloacae of the Tarquins are still among the architectural wonders of the world. The censors, ediles, and curators, who at different periods had charge of the buildings, and of the apparatus for the removal of impurities, were invested with great powers for the execution of their functions, and derived a corresponding dignity from them.<sup>23</sup>

Chadwick himself seems to have shared the opinion of the editors of the *Edinburgh Review*, despite his onetime characterization of history as “one great field of cram, of reliance on memory, and of dodging.”<sup>24</sup> While developing his unrealized plan for the reconstruction of

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<sup>23</sup> *Edinburgh Review* 1850.

<sup>24</sup> Chadwick 1862.

London's abominable sewer and water infrastructure, Chadwick looked to ancient Roman examples as models, including a ceramic pipe from Switzerland and Pompeiian latrines.<sup>25</sup>

Until Bazalgette, London's human waste was drained by porous brick sewers that emptied into the Thames, upstream of drinking water inflows, leaking along the way directly into drinking water cisterns. This situation led to recurrent and severe outbreaks of cholera in the city. The connections between drinking water, human waste, and cholera were not yet clear to physicians, let alone the general public, but due to the prevalence of a miasma-based understanding of epidemic disease, the omnipresence of filth in the city was nevertheless connected in many minds to the cholera outbreaks.<sup>26</sup> As Chadwick put it in a report to Parliament in 1846, "All smell is, if it be intense, immediate acute disease." The solution he had proposed four years earlier for Great Britain's recurrent urban health crises was "drainage, street and house cleansing by means of supplies of water and improved sewerage, and especially the introduction of cheaper and more efficient modes of removing all noxious refuse from the towns."<sup>27</sup> In this context, Roman sanitary engineering, which recent archaeological investigations had revealed involved round, relatively leak-

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<sup>25</sup> From Chadwick's *Report to the Sanitary Commission*, 1849: "A friend at Zurich has forwarded to me a specimen of an earthenware pipe laid down by the Romans probably two thousand years ago, and which has worked until recent times under five hundred feet of pressure. Vitruvius points out the evils of lead and metal pipes for the distribution of water, and the advantages of earthenware pipes as substitutes. Miss [Harriet] Martineau recently found the remains of earthenware pipes laid down for the distribution of water through the ancient city of Petra. The remains of water-closets, which are thought to be an English invention, were found at Pompeii..."

<sup>26</sup> Halliday 2001, Paneth 1998.

<sup>27</sup> Chadwick 1842.

proof terracotta and stone pipes that were constantly flushed with fountain overflow, was indeed impressive.

Sanitarians on the other side of the Atlantic also admired Roman public health. The Massachusetts Sanitary Commission used the *Edinburgh Review's* summary of the ancient history of public health as evidence for the value of investing in sanitary infrastructure in the so-called Shattuck Report of 1850. The result of this report was the creation of the first state health department in the United States. In 1884, Edward Orton, president of Ohio Agricultural College, gave a lecture to the Ohio State Medical Society in which he expressed the same sentiment:

Let it not be thought that this claim on the part of society is a modern invention. It is as old as civilization. The laws of Moses are full of hygienic requirements... Ancient Rome was also wise in its day and *for its day*, in regard to sanitary law. A part of the drainage and waste of the present city is flowing through the *cloaca maxima*, the great sewer that was built by King Tarquin, 500 years before Christ. The house of a well-to-do Roman in the best days of the imperial city was provided with sanitary appliances in the matter of drainage and ventilation, that show that he was living up to his best light. To obtain a pure and abundant supply of water, the city counted no outlay too great. The stupendous aqueducts constructed for this purpose were among the wonders of ancient engineering. No city of modern times has ever approached imperial Rome in the number or equipment of its public baths. In the later periods of the empire the care of the State for the health of the people was shown in the appointment of a certain number of physicians for every city, according to its population, who constituted in reality a board of health. The Dark Ages that followed the downfall of the Roman Empire were darker in nothing than in their utter ignorance and neglect of the most obvious principles and laws that apply to the preservation of the public health.<sup>28</sup>

The establishment of sanitation departments and the construction of modern sewers and water supplies was, for the first Anglophone sanitarians, not something new in history but

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<sup>28</sup> Orton 1884, 351-52.

rather a return to the successful and well-evidenced approach to city management that had prevailed in Europe before the alleged irrationalism of the medieval period.

Nineteenth-century understandings of disease were instrumental to this view of the history of public health. Before the formalization of germ theory at the turn of the twentieth century, Western understandings of disease had not changed substantially since the time of Galen, despite an improvement in anatomical knowledge.<sup>29</sup> The concept of miasma survived until the second half of the nineteenth century, and accordingly public health itself was by and large concerned with environmental and social factors.<sup>30</sup> Orton identified the “three great factors of human health” as “pure air, pure water and nutritious food,” and asserted that public health was the duty of the state to safeguard and maintain the first two for their citizens.<sup>31</sup> Such an understanding of health, its environmental factors, and the state’s responsibility for safeguarding it can also be found in Roman sources, such as the last passage of Frontinus discussed above.

#### *b. Rethinking Roman health and sanitation*

Over the course of the next century, many dramatic advances in medical science fundamentally changed the definition of public health. The promotion of the germ theory of

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<sup>29</sup> Andreas Vesalius’ anatomical illustrations, first published in 1543 as *De humani corporis fabrica*, corrected mistakes in Galen’s understanding of anatomy that had been taken as fact by European physicians for over a millennium. William Harvey was the first to accurately describe the anatomy of blood circulation in his 1628 *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*.

<sup>30</sup> On the persistence of the miasma theory of infectious disease into the late nineteenth century: Rosen 2015, 164-166.

<sup>31</sup> Orton 1884, 350.

disease by Louis Pasteur, Robert Koch, Joseph Lister and others at the end of the nineteenth century led to unprecedented human control over infectious disease.<sup>32</sup> The development of bacteriology sharply reduced mortality from complications following childbirth and surgery due to improved hygiene. The discovery of penicillin added an entirely new weapon to the medical arsenal, the antibiotic.<sup>33</sup> The development of reliable and safe vaccines in the middle of the twentieth century resulted in the eradication from the Western world of two of the most devastating infectious diseases, polio and smallpox (with smallpox eradicated globally in 1979). In a perhaps apocryphal but widely cited anecdote, Surgeon General William H. Stewart is claimed to have confidently stated that it was time for the United States to “close the book on infectious disease.”<sup>34</sup> The emergence of AIDS, Ebola, and drug-resistant pathogens (including most notoriously multi-drug resistant tuberculosis), as well as the anti-vaccination movement, in the decades since has signaled a renewed focus on infectious disease. To the Western world of the mid-twentieth century, however, science truly seemed to have decisively won the fight against human illness.

The confidence of mid-century science changed the face of public health, which now afforded vaccinations and drug development equal importance to sanitation. This new

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<sup>32</sup> Chemist Louis Pasteur (1822–1895) made a number of discoveries that supported germ theory, including the decontamination technique named after him. Bacteriologist Robert Koch (1843–1910) is best known for his four so-called “Koch’s Postulates,” laboratory criteria for establishing causal linkages between pathogens and diseases. Joseph Lister (1827–1912), a surgeon and early supporter of Pasteur, developed practical applications of germ theory in order to reduce deaths from post-surgery infections.

<sup>33</sup> British bacteriologist Alexander Fleming discovered the antibiotic properties of penicillin in 1928, but the mold was not introduced as a consumer drug until 1942.

<sup>34</sup> Stewart was Surgeon General from 1965 to 1969. On the authenticity of the statement, see Spellberg and Taylor-Blake 2013.



understanding of what public health is translated into a new narrative about the movement's history. Unlike Chadwick, who saw the ancient Romans as a model to emulate, historians of this period generally approved of the state of sanitation and public health in their own surroundings. Rome was no longer a utopia of sanitation, but rather a curious and notable but ultimately insufficiently vigorous step in the right direction on the path leading to the modern state of affairs. According to this view, the Romans' unfortunate misunderstanding of disease causation meant that they could never have achieved the miracles of modern science, but their impressive sanitary infrastructure displayed an admirable rationality and commitment to improving health not seen again until the early modern period.

George Rosen's *A History of Public Health*, first published in 1958 and still a classic in the genre that is commonly used in public health history courses, is emblematic of this type of thinking. Rosen, a physician and sociologist with a deep interest in medical history, was not an expert in ancient history *per se*. Nevertheless, he was well versed in the types of evidence available to scholars, and he identified several of the crucial facets of Roman public health that this dissertation will expand upon, such as the groundbreaking nature of the Augustan creation of the *curator aquarum*. Rosen was optimistic about imperial Roman public health, stating that Roman authorities "set the world a great example and left their mark on history,"<sup>35</sup> and referring without hesitation to a Roman "public health administration" led by *triumviri valetudinis*.<sup>36</sup>

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<sup>35</sup> Rosen 1958, 38.

<sup>36</sup> Rosen 1958, 39, 49. The only evidence for such an office is a dubious reading of a late Republican coin. The coin is a denarius of M' Acilius Glabrio, no. 442 in Crawford's *Roman Republican Coinage*, which bears a head of Salus on the obverse and a personification of

The respect Rosen had for the Romans is made clear in his prologue, which he ends with a misquotation of Cicero's *De legibus*: "Salus publica suprema lex."<sup>37</sup> Despite his medical background, Rosen was a firm believer in the importance of social and environmental factors of health. The problems that a public health program must address, according to him, were "the control of transmissible disease, the control and improvement of the physical environment (sanitation), the provision of water and food of good quality and in sufficient supply, the provision of medical care, and the relief of disability and destitution."<sup>38</sup> Though Rome was unable to make much progress regarding the first problem, he felt that it devised admirable solutions to the others.

Individual Roman citizens, according to Rosen, also took great care of their own health by visiting baths and (following Vitruvius' advice) avoiding building houses in unhealthy places. Rosen's reading of Roman public health adheres closely to the literature of the governing elite at Rome, from Augustus' *Res Gestae* to Frontinus' *De Aquaeductu*. While such texts are indeed valuable for reconstructing the public health infrastructure at Rome, Rosen does not acknowledge their fundamentally political natures and as a result falls into the trap of believing what the Roman imperial government said about its own intentions and effectiveness. More troubling is his assumption that scientific and

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Valetudo on the reverse. The legend on the reverse reads MN ACILIVS III VIR VALETV. Numismatic scholars, including Crawford, have read VALETV simply as an identification of the deity pictured on the reverse, rather than a modifier for *triumvir*.

<sup>37</sup> Cicero, *De legibus* 3.3.8. Cicero's text actually reads "Ollis salus populi suprema lex esto." Because this line comes in the middle of a discussion of censors, especially as relates to their military function, it is likely that Cicero did not intend "salus" here to mean "health" in the sense that Rosen thought he did, but rather the more general "safety."

<sup>38</sup> Rosen 1958, 1.

technological knowledge were the only factors preventing pre-modern governments from achieving a modern level of public health. Such a view implies that all governments consistently care about collective health, and obfuscates the role that politics, culture and the economy play in public health programs.<sup>39</sup>

More recent surveys of pre-modern public health history have tended to take a more cynical stance regarding Roman public health. This shift came largely because of the influence of Scobie's much cited 1986 "Slums, Sanitation, and Mortality in the Roman World." Scobie deconstructs Rosen's optimistic image of Rome one institution at a time, replacing it with a picture of a sordid capital city complete with endemic sewage overflow and corpses in the street. Since its publication in 1986, Alex Scobie's "Slums, Sanitation, and Mortality in the Roman World," has maintained a strong hold over the discussion of public health and sanitation both in and outside the city of Rome.<sup>40</sup> While Scobie acknowledges that the Romans "achieved a remarkable standardization... [and] some degree of progress in the sphere of public hygiene," his vision of the capital of the empire is at times as gripping and revolting as the Chicago of Upton Sinclair's *The Jungle*:

Before the pestilential Esquiline cemetery became the gardens of Maecenas, dogs must have been a common sight there fossicking among the many shallow or open mass-burial pits from which fragments of corpses could be conveyed to various parts of the city.<sup>41</sup>

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<sup>39</sup> One recent example of the non-linear relationship between medical science and public health is the infant mortality rates of different races in the United States. See, e.g., Rossen 2014.

<sup>40</sup> A Google Scholar search conducted on June 30, 2017 returned 289 recorded citations of the article.

<sup>41</sup> Scobie 1986, 418.

He concludes the article:

High density living in insanitary urban dwellings and surroundings can have only one major consequence in a preindustrial society which lacks effective and cheap medical care: a short, often violent life. That this was the common lot of the millions of people in the Roman world who lived on or below subsistence level can hardly be doubted, given the conditions discussed above.<sup>42</sup>

Scobie's combination of literary evidence, archaeological evidence, and paleopathology was groundbreaking, though some scholars have taken issue with his methodology.<sup>43</sup> Among the many Roman historians who cite Scobie are Henrik Mouritsen, Garrett Fagan, Andrew Wallace-Hadrill, David Mattingly, and Walter Scheidel.<sup>44</sup> The article's clout has not been limited to the field of Roman history; authors of more general surveys of health and sanitation also frequently turn to Scobie (and often Scobie alone) when they have occasion to make reference to the Roman period.<sup>45</sup>

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<sup>42</sup> Scobie 1986, 433.

<sup>43</sup> The bulk of Scobie's positive textual evidence comes from elite, satirical literary writers living in the high empire, particularly Martial, Juvenal, and Petronius; legal sources like the Digest are used mostly to construct an argument from silence. The archaeological discussion relies primarily on research that was already almost a century old in the 1980s, such as that of Holger Mygind and Rodolfo Lanciani. More recent archaeological evidence that could complicate the picture, such as Jashemski's discoveries of sewer junctions and piped latrine water in Pompeii in the 1970s, are relegated to footnotes and not integrated into the paper's conclusions. Much of the discussion that has taken place regarding this work has been in the context of conferences rather than books or peer-reviewed journals. See for example Ray Laurence's exploration of the modern Anglophone use of Rome as both a paragon of urban sanitation and a cautionary tale of overpopulation and unhygienic practices in Parkins 1997, and Neville Morley's grounding of the same concept in Roman literature in King 2005, both of which serve as important checks to Scobie's argument.

<sup>44</sup> Fagan 2002, Wallace-Hadrill 1988, Mattingly 2013, Scheidel 2001b, 2007, 2010.

<sup>45</sup> Recent examples of which include Curtis 2007, which interestingly cites Scobie as evidence for how much the Romans cared about hygiene, McCormick 2003, and Rau 2006.

While Scobie's article has retained significant cachet among Roman historians, some of its assertions have not held up well over time. The most drastic corrigenda have come from archaeology. A particularly clear example is that of latrines: in her recent work on the subject, Ann Koloski-Ostrow notes that at the time of writing she was aware of at least twenty-three public or private toilets in the city of Rome, and expected that Rome's notoriously difficult stratigraphy hid a great deal more. Writing in the 1980s, Scobie, however, knew of only two latrines within the limits of the capital and, accordingly, assumed that few ever existed.<sup>46</sup> Other critiques have focused on Scobie's selective use of sources and modernizing standards.<sup>47</sup> As Koloski-Ostrow points out, Scobie and other scholars who wish to emphasize Rome's unsanitary aspects tend to give disproportionate weight to comments by Seneca, Juvenal, and Martial, the last two of whom rarely had something positive to say about anything.<sup>48</sup>

Furthermore, a look at the historiographical context of "Slums, Sanitation and Mortality" reveals how tenuous any claims about the reality of ancient Roman health are, whether pessimistic or optimistic. The article was originally conceptualized as a response to the then-recent development of an interest among Roman historians in the demography of the Roman world.<sup>49</sup> A standard feature of Roman demographic research has been the assumption of an average life expectancy at birth of around twenty-five years for both

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<sup>46</sup> Koloski-Ostrow 2015, 68.

<sup>47</sup> Laurence 1997: "In fact, [Scobie] is writing a sanitary report on the city of Rome. Like Chadwick, he takes a standard that had never existed and looks for abuses of that standard."

<sup>48</sup> Koloski-Ostrow 2015, 121.

<sup>49</sup> Brunt 1987 among others.

sexes, despite a lack of reliable quantifiable evidence.<sup>50</sup> A life expectancy at birth, or  $e(0)$ , of under thirty years implies very high mortality rates, especially among infants and children. Mortality rates and in particular infant and child mortality rates in modern history have been strongly correlated with poor sanitation.<sup>51</sup> As Scobie notes, the arguments of Roman historians who argued for an  $e(0)$  under thirty years were predicated on the unproven, if reasonable, assumption that Roman urban sanitation was as poor or worse than sanitation in the developing world of the twentieth century.<sup>52</sup> “Slums, Sanitation, and Mortality” is therefore an attempt to collect textual and archaeological evidence to support the idea of ancient Rome being, in as Bruce Frier put it, one of many “fetid metropolises” that fostered extremely high mortality rates, something Scobie himself acknowledges at the beginning of the article.<sup>53</sup>

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<sup>50</sup> In a landmark study, Hopkins 1966 demonstrated that Roman epitaphs, one of the most tempting bodies of evidence for Roman life expectancy, are unreliable to the point of being near useless for determining the age structure of Roman society because they under-represent certain categories of people (including infants and children, whose mortality rates greatly impact age structures), and are also unreliable indicators of the actual ages of the deceased due to age rounding and exaggeration. Nevertheless, he concludes that it “seems reasonable to hypothesize” that Roman life expectancy at birth was 20 to 30 years on the basis of it being unlikely that Romans had lower mortality than better-recorded “pre-industrial populations with similar technical achievements or towns” such as the modern developing world. In particular, Hopkins likened the demography of Rome to that of India at the beginning of the 20<sup>th</sup> century.

<sup>51</sup> Esrey et al. 1991, a review of 144 studies a host of water-borne diseases, concluded that the introduction of sanitary water and sewage infrastructure in the developing world results in an average reduction of the child mortality rate by 55%. Similarly, Victora et al. 1987 found that children living in homes without piped water were 4.8 times more likely to die of diarrheal diseases than those with piped water.

<sup>52</sup> Scobie 1986, 399.

<sup>53</sup> Frier 1982, 250.

The field of Roman demography, which inspired the article, has continued to grow and develop since 1986.<sup>54</sup> Despite the instability of the Roman evidence, there has been broad consensus that the population of Rome reached one million by the reign of Augustus, increasing from around about 375,000 in 100 BCE and from about 600,000 in 50 BCE.<sup>55</sup> This is rapid growth even for a modern city; the comparable growth of Manhattan, for example, from a population of 515,547 in 1850 to 1.1 million in 1880, would not have been possible without transatlantic immigration, railroads, and a massive need for industrial labor, none of which existed in Rome. It has been particularly difficult for scholars to reconcile this growth with what we understand of ancient demographic patterns, particularly the low life expectancy of around twenty-five years for both sexes generally accepted by Roman historians, although some scholars have challenged that figure with different degrees of success.

Demography is primarily concerned with health only inasmuch as it affects mortality and reproduction. For a more nuanced understanding of health and disease, the field of medical history has much to offer. Like demography, Roman medicine (as distinct from Greek medicine practiced in Rome) has also attracted a great deal of scholarly

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<sup>54</sup> See Hin 2013 for a summary of the history of Roman demography. Much discussion has focused on the size of the population, and in particular on the interpretation of certain Augustan census figures. In brief, Roman demographers have traditionally fallen into two camps, the “low counters,” who believe that the Augustan figures include all Roman citizens, and the “high counters,” who argue that Roman censuses only counted a small subset of citizens, and therefore that the actual total population was substantially larger. Recently, Saskia Hin has argued for a “middle count” of six to ten million citizens in 28 BCE, suggesting a revision in our understanding of the criteria for inclusion in the census before and after the fall of the Republic

<sup>55</sup> Hopkins 1978, 68-9, 96-8; Scheidel 2004, 14-5; Hin 2013, 220; Lo Cascio 2006, 59; Jongman 2003, 103; Morley 1996, 33-9; Brunt 1987, 384.

attention since Scobie, transforming from an academic niche filled largely by hobbyist physicians into a bona fide subfield of Roman history. Partially this is the result of the increased accessibility of certain types of evidence, including archaeological evidence and the growing corpus of Galenic texts.<sup>56</sup> Scholars of Roman medicine have also begun to understand ancient medicine as a lens through which to study sociological and anthropological questions, and have sought to contextualize medicine within Roman culture and belief systems.<sup>57</sup> The work of Vivian Nutton has been especially important in the development of Roman medicine as a topic worthy of study in its own right.<sup>58</sup> While he has written substantially on medicine in both Greece and Rome, Nutton's focus on the social context of medicine and medical practitioners emphasizes that Roman medicine cannot be treated just as a footnote to Greek medicine.<sup>59</sup> Furthermore, his work on "the medical marketplace" has been instrumental in opening up the field of ancient medicine to include questions of relevance to social historians and historians of gender.<sup>60</sup>

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<sup>56</sup> Baker 2002 and 2004. Cruse 2004 also relies heavily on archaeological evidence, particularly from Roman Britain.

Projects that have increased Galen's accessibility are new translations of the Greek into English, new translations of Galenic texts that only survive in Arabic copies, the discovery of new Galenic texts, and the development of a body of study of Galen himself, which includes Mattern's recent biography.

<sup>57</sup> Most recently, Israelowich 2015.

<sup>58</sup> Also influential in bringing Roman medicine within the fold of Roman history were Jackson 1988 and Scarborough 1969.

<sup>59</sup> On Roman medicine as a distinct phenomenon, see Nutton 1986; Nutton 1993; and the relevant chapters in Nutton 2012.

<sup>60</sup> Nutton 1992. Riddle 1992 was published the same year and also sparked interest in alternative sources of medical authority in antiquity, especially midwives. Further work on questions of gender in Roman medicine includes Flemming 2000.



The work of Mirko Grmek (though focused on Greece) and Danielle Gourevitch has emphasized the materiality of the body and especially of illness in ancient medicine. Grmek's development of the concept of pathocenosis emphasized the importance of diseases themselves in the development of ancient medical thought systems.<sup>61</sup> Gourevitch's recent *Pour une archéologie de la médecine romaine* furthers this concept in the Roman context by grounding it in cutting-edge bioarchaeology – including tooth analysis and palaeoparasitology – as well as more traditional archaeological material such as medical tools.<sup>62</sup> The two scholars collaborated on an ambitious art historical project in 1988, when they scoured ancient art for evidence of recognizable medical problems.<sup>63</sup> The sum of these projects is an increased focus on the body itself and diseases themselves in ancient medicine, as distinct from pure medical theory.

While both areas remain lively in terms of publications, there has so far been little interaction between the historians of Roman demography and the historians of Roman ideas about the body. As a result, discussion of Roman health is somewhat Balkanized, with demographically oriented arguments about the actual health outcomes of Romans kept separate from research into how the Romans understood and attempted to influence their own health. One notable exception is Sallares' *Malaria and Rome*, which uses both medical texts and reconstructed demographic data to shed light on the physical and cultural impact of one disease over centuries.<sup>64</sup>

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<sup>61</sup> Grmek 1991.

<sup>62</sup> Gourevitch 2011.

<sup>63</sup> Grmek and Gourevitch 1988.

<sup>64</sup> Sallares 2002.

Returning to the question of the historiography of Roman public health, the growth of critical scholarship on living conditions and demography over the second half of the 20<sup>th</sup> century has complicated the narratives put together by Rosen and his predecessors. A chapter titled “History of Public Health and Sanitation in the West before 1700” in the *Cambridge World History of Human Disease*, written by Ann Carmichael, a specialist in the Italian Renaissance, attempts to provide an updated model by reconciling Scobie with Rosen. Carmichael concludes that there were two Romes, one rich, clean, and healthy, and one poor, filthy, and sick.<sup>65</sup> While her narrative is unfortunately marred by her unfamiliarity with ancient Rome (e.g. her assertion that Rome’s population reached “8 or 10 million” at its peak), her “tale of two cities” explanation of Roman public health finds corollaries in the work of practicing Roman historians as well. Ray Laurence expresses a similar idea in his critique of Scobie, arguing that embracing the idea of a heterogeneous urban environment is more historically accurate than any attempt to characterize the city as either healthy or unhealthy.<sup>66</sup> Using very different methods, Scheidel and Friesen come to similar conclusions based on economic models: while Rome’s elite would have enjoyed relatively good living conditions, “the vast majority of the population lived close to subsistence,” making them more susceptible to all sorts of threats to physical health.<sup>67</sup>

Even when their authors attempt to avoid passing judgment on the standards of health and sanitation in Rome, a common characteristic of the “grand narrative” surveys of

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<sup>65</sup> Carmichael 1993.

<sup>66</sup> Laurence 1997, 14: “Urban living, whether ancient or modern, is full of contradictions. To indulge in any exercise that asserts that life in ancient Rome was ‘good’ or ‘bad’ is to pursue a rhetorical exercise familiar to the ancients.”

<sup>67</sup> Scheidel and Friesen 2009, 62.

public health history discussed above, from Rosen to Carmichael, is that they are by nature teleological: they organize instances of public action related to health into narratives of sanitary progress, always with modern standards in mind. Rome is understood to be either an admirable early forerunner of modern public sanitation, or — after Scobie — another example of how wrong-headed all pre-modern people were with regard to their own collective health. Such an approach necessarily simplifies the historical context of each period included in order to emphasize the narrative leading to the achievements of modern medicine. These surveys do not ask questions along the lines of *why* the Roman state undertook monumental sanitation and water supply projects from time to time, or *why* doctors enjoyed a jump in social status at the start of the imperial period. Nor do they account for changes in Roman public health over time; everything from aqueducts to latrines to medical theory is treated synchronically.

*c. New paradigms*

To approach questions along these lines for other periods of history, scholars of the last quarter century have relied heavily on the work of Michel Foucault. Particularly useful is his concept of biopower, which articulates the foundation of the relationship between citizen and government in the modern world. Foucault explains biopower in contrast to the more primitive sovereign power, which he defines as follows:

The sovereign exercised his right of life only by exercising his right to kill, or by refraining from killing; he evidenced his power over life only through the death he was capable of requiring. The right which was formulated as the 'power of life and death' was in reality the right to take life or let live. Its symbol, after all, was the sword.<sup>68</sup>

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<sup>68</sup> Foucault 1990, 136.

In modern states, by contrast,

[Biopower] focused on the species body, the body imbued with the mechanics of life and serving as the basis of the biological processes: propagation, births and mortality, the level of health, life expectancy and longevity, with all the conditions that can cause these to vary. Their supervision was effected through an entire series of interventions and regulatory controls: a bio-politics of the population... Power would no longer be dealing simply with legal subjects over whom the ultimate dominion was death, but with living beings, and the mastery it would be able to exercise over them would have to be applied at the level of life itself: it was the taking charge of life, more than the threat of death, that gave power its access even to the body.<sup>69</sup>

Foucault expanded this concept of biopower throughout *The History of Sexuality* and his other influential works, including *Discipline and Punish*. Among the institutions and norms of modern society that enact and enforce biopower are the census, birth certificates, sanitation departments, public health campaigns, taxation, marriage, prisons, and hospitals. Such a holistic theory of the relationship between modern governments and the lives of their citizens has been instrumental to the development of modern public health departments, which no longer concern themselves only with sanitation, nutrition and infectious disease, but also seek to reduce the harm caused by sugary diets, gun violence, childhood poverty, and disability stigmatization, among many other concerns.

Foucault has been popular among recent historians of public health, who use the emergence of biopower at the dawn of the modern era in Europe as the *terminus post quem* for public health as a concept. Certainly, it is appropriate to tie the development of modern public health institutions to the development of neoliberalism. For example, without the

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<sup>69</sup> Foucault 1990, 139-43.

refinement of statistical science by economists like William Playfair in the late eighteenth and nineteenth centuries, the field of epidemiology could never have emerged. In another sense, however, Foucault's theory has had collateral damage, making it appear to modern historians of public health that no government before the turn of the 18th century could possibly have conceived of the body of its citizens as a whole or made policy decisions with the express intention of improving health. Some historians have gone to great lengths to rationalize away contrary evidence. For example, Rome's aqueduct system, which Frontinus explicitly characterizes as existing specifically to provide high-quality water for the benefit of the public health, is described as a "luxury" in the major handbook on Roman aqueducts.<sup>70</sup> One wonders what Cicero's imagined Appius Claudius Caecus would think of that. More frequently, sanitation programs are described in surveys of public health as systems of "taboo," relegated to religious ideas of purity, as if ancient people were only

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<sup>70</sup> Hodge 1992, 5: "One point, however, may be disposed of here and now. As the mainstream of scholarly thought in ancient history has moved further away from conventional tradition and veered more toward an emphasis on social history, one has sometimes seen the aqueducts appraised in a new light and lauded for a new virtue. What other early civilisation, we are asked, set such store by public hygiene, by abundant pure drinking water, by the very essentials of health and life? On this bases, do not the aqueducts rank as Rome's greatest and proudest achievement? To the social historian the argument is irresistible, so we may well declare clearly that it is almost wholly false... The real argument comes from the fact that the Roman aqueducts were not built to provide drinking water, nor to promote hygiene. Nearly all Roman cities grew up depending for their water on wells or cisterns in the individual houses, and some cities got through their entire history without ever having an aqueduct at all... Of course, once the aqueduct was there and good water readily available in great abundance, people naturally drank it. Why not? But the wells were still there as a supplement, and in some cities probably even remained the major source of supply... the aqueducts, then, were not built to fill a basic human need. They were in fact a luxury."

concerned with metaphysical or symbolic cleanliness and health.<sup>71</sup> According to this line of thought, any real health effect was purely incidental.

Dorothy Porter's *Health, Civilization and the State* is one such survey critical of the "grand narrative" of public health history. Influenced by Foucault and Elias, she rejects the notion of objective progress and instead focuses on "the relative significance of population health... in different contexts."<sup>72</sup> In other words, she examines a professed governmental concern for population health as a specifically political tool in Western European history. While Porter's primary interest is the emergence of modern public health systems in the nineteenth and twentieth centuries, she includes a brief chapter on the ancient world. According to Porter, Ancient Greek and Roman (and Chinese, Egyptian, Jewish, and Mesopotamian) medicine and sanitation were all of a kind, based on primitive ritual, and served primarily to assure the spiritual purity of "patricians," whom she does not further identify. At the same time, however, Porter refers to a "practical turn of the Roman frame of mind" that made the Roman state "favour the direct effect upon health of sanitary improvement." She continues on to claim that "The administration of public health services in Rome extended to the government supervision of public baths, water supply, street cleaning and the regulation of the sale of spoiled food... However, the Roman state provided a salubrious environment for the rich and privileged only."<sup>73</sup>

Missing entirely from Porter's narrative of ancient public health systems are the roles of politics, economy, and culture in shaping policies and expectations relating to

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<sup>71</sup> For example, the essays in Bradley 2012.

<sup>72</sup> Porter 1999, 9.

<sup>73</sup> Porter 1999, 18.

population health, topics which feature heavily in her later chapters on more recent societies. The growth of what she terms “public health services” and “the science of public administration” (phrases as optimistic and modernizing as any of Rosen’s) is not contextualized within Roman history and takes on the appearance of being an organic process, without the initiative, vision, and political maneuvering of individual Romans. Even in a self-consciously Foucauldian narrative, the treatment of Rome is synchronic and teleological.

A recent survey intended to focus only on the pre-modern period, William York’s *Health and Wellness in Antiquity through the Middle Ages*, similarly removes politics from ancient public health. In one of a handful of paragraphs devoted to Roman institutions and health, York writes, “By the first century C.E., the maintenance of the aqueducts was a fulltime job and a position of *curator aquarum* (procurator of the water supply) of consular rank was created with two assistants of senatorial rank to oversee this work... [which attests] to the amount of labor involved and the value given to this work by the imperial leaders.”<sup>74</sup> While factually correct, this passive narrative gives a sense of apolitical, natural momentum to the growth of the aqueduct system, quite different from the deeply political significance of the water supply infrastructure apparent in ancient texts.<sup>75</sup> Further, by dating this development in such a vague way, York misses the opportunity to draw the obvious connection between it and Augustus’ new political regime.

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<sup>74</sup> York 2012, 210.

<sup>75</sup> For example, Livy’s narratives of the Senatorial infighting sparked by the construction and maintenance of the Republican aqueducts, explored in my chapter 2, and the politically delicate nature of water pirating as explored in Peachin 2004.

*d. Pre-modern public health on its own terms*

Frustrated with the simplified narratives presented in histories of public health, some historians of pre-modern periods have reexamined evidence for public health activities in a way that neither relies on modern narratives of progress nor overlooks political and cultural contexts. Especially admirable work has been done by a group of medieval historians, led primarily by Guy Geltner and Carole Rawcliffe.<sup>76</sup> Their argument has two major tenets. First, it holds that the intention to improve health and reduce disease in a population should be divorced from the efficacy of those programs, and the inefficacy of a program should not negate the historical importance of the social and political conditions that led to its implementation. Second, Geltner and Rawcliffe contend that the tendency of public-health historians to use only medical texts and legislation as evidence when studying pre-modern public health is misguided. Instead of these 'prescriptive and normative' sources, which give a skewed and incomplete picture of the 'healthscape' of a particular time, they argue that historians must incorporate 'descriptive and practical' sources like diaries, letters, court documents, and contemporary histories or chronicles in order to understand what people and governments actually did in response to disease.<sup>77</sup> Studying the medieval period, Geltner and Rawcliffe have access to relatively vast quantities of archival material, including town registers, diaries, and government accounts, all of which they use to revise the traditionally bleak picture of medieval public health into a more nuanced healthscape that includes some individuals and municipalities that cared very much about the physical wellbeing of their inhabitants.

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<sup>76</sup> The following position is set forth in Geltner 2012, Geltner 2013, and Rawcliffe 2013.

<sup>77</sup> Geltner 2013, 395.



Historians of the Roman period will no doubt find Geltner and Rawcliffe's work stimulating and will see parallels in the moral and supernatural aspects of the conception of disease, and also in the roles of governmental bodies like Geltner's *curia viarum*. Still, many of the kinds of archival material they use simply do not exist for the Roman period. Roman historians do however have access to Roman literature, histories, and letters, all of which can and should be further integrated into our understanding of what health and healthcare meant in ancient Rome. Many Roman historians have already used this sort of material in various ways out of necessity. In their attempts to understand the demographic and cultural impact of the Antonine Plague, Roman historians from R.P. Duncan Jones to Danielle Gourevitch have included in their studies of the plague all possibly relevant texts, from histories to epitaphs.<sup>78</sup> Scobie used poetry and historical anecdotes to draw conclusions about the sanitary condition of Rome.<sup>79</sup> Despite this, our understanding of public health in Rome—that is, *public* action for the improvement of citizens' health—comes almost entirely from prescriptive sources like didactic texts and legislation.<sup>80</sup>

Reassessing the way we choose and employ textual sources when talking about premodern public health opens a number of new pathways. Especially in the case of antiquity, we must also leave room for the emergence of completely novel evidence that renders old narratives obsolete. One example is the discovery of great numbers of Roman latrines between the publication of Scobie's article and that of Koloski-Ostrow's book.

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<sup>78</sup> Duncan-Jones 1996, Gourevitch 2013.

<sup>79</sup> Scobie 1986; see criticisms of Scobie's selective use of non-medical texts in Laurence 1997 and Morley 2005.

<sup>80</sup> For example, Scarborough 1981.

While it works as an especially convenient example to illustrate this phenomenon, Scobie's underestimation of the number of latrines within Rome is actually just one part of a larger received narrative about Roman latrines that is challenged by Koloski-Ostrow's work, which represents a significant step forward in the study of Roman public health while leaving some fundamental questions unanswered.

Based on a chronological and typological analysis, Koloski-Ostrow locates the adoption of latrines into Roman culture not within the boundaries of military camps and networks, which have traditionally dominated histories of Roman latrines, but instead within the civic arena of cities around Italy in the late Republic.<sup>81</sup> Furthermore, while Romans had been exposed to Greek latrine technology since the beginning of the second century BCE at latest, they did not begin to build their own in significant numbers until about 100 BCE, suggesting that technological knowledge alone does not suffice to explain the spread of latrines in the ancient world. Koloski-Ostrow offers three factors that could plausibly have contributed to Romans beginning to construct large numbers of latrines precisely when the archaeological evidence suggests they did: first, the concurrent rise in popularity of public baths; second, a cultural change; and third, Roman innovation in cement and other building materials, which would have made the construction of latrines increasingly cheaper and easier.<sup>82</sup>

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<sup>81</sup> In short, because the best archaeological evidence for Roman latrines for a long time came from military sites outside of Italy dating to the second century CE or later, the story of their place in Roman society was largely dominated by the Roman army of the High Empire. As Koloski-Ostrow summarizes that narrative, "the Roman army marched out of Italy and spread latrine culture across the Mediterranean lands it conquered."

<sup>82</sup> Koloski-Ostrow 2015, 53.

Koloski-Ostrow's second potential factor, that of cultural change, is the most nebulous of the three but also the most provocative. In the one paragraph she devotes to expanding on this possibility, she mentions both the increasing urbanization of the Roman population around the time of Augustus and the "political coinage to be gained" that the "authorities who built baths and toilets... would no doubt have appreciated... even if they did not care specifically about what happened to the poor in the long run."<sup>83</sup> Quite a lot is packed into this one statement. Which authorities, specifically, built these amenities, and did they do so entirely on their own initiative? What did they expect to receive in return? How do we know that these authorities did not care about the poor, or that it was indeed the poor who benefited from them? Most importantly, why should public latrines have translated into political capital in the first place, and why would they not have done so before the evidence tells us they did? These are the types of fundamental questions that have still not been given the attention they deserve in Roman history, and that I focus on here.

### **III. Revisiting Roman public health**

The purpose of this dissertation is not to evaluate Roman health by modern standards, nor to support any particular demographic model over another. Rather, it is an attempt to introduce diachronic historical and political nuance into debates on Roman health and sanitation. Specifically, how did the Romans, and especially the Romans directly involved in the operation of the state, understand their own collective health? How did historical and political circumstances influence that understanding, and the actions taken as a result of

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<sup>83</sup> Koloski-Ostrow 2015, 53.

that understanding? While my lines of inquiry could extend into the late antique period, I have decided to limit my study from the middle Republic to the Severan dynasty. Doing so allows me to focus on a narrow historical question: how did the Roman state's relationship to the health of the citizen body change with the birth and maturation of the Roman Empire?<sup>84</sup>

Additionally, this turbulent period of Roman history has long attracted scholars interested in how political ideas about the nature of the relationships among state, people, land, and gods manifested themselves in literature, art, and eventually imperial self-representation.<sup>85</sup> This dissertation asserts that *Salus*, found by Noreña to be one of the six imperial benefits most frequently referenced on Roman coinage between 69 and 235 CE, was not merely an abstract concept.<sup>86</sup> Rather, like the other benefits, *Salus* was understood to be assured by concrete and specific actions of the emperor and his administration. To be sure, *Salus* as a concept meant more than just the health of the body, and was often used to refer to deliverance from violence or a more metaphorical wellbeing.<sup>87</sup> Still, freedom from disease was a crucial aspect of *Salus* that, I argue, must be taken seriously as a literal value

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<sup>84</sup> Ending at the start of the third century also allows me to bypass the complicated question of state Christianity, which greatly influenced the Roman understanding of and reaction to epidemic disease, as well as the practice of public benefactions. For a study of late antique responses to epidemic that explores the relationship between disease and state in the context of Christianity, see Stathakopoulos 2004.

<sup>85</sup> Noreña 2011, Zanker 1990, Wallace-Hadrill 2008.

<sup>86</sup> The other virtues in the top six are *Victoria*, *Felicitas*, *Pax*, *Concordia*, and *Fortuna*. Noreña 2011, 109. See chapter 4 for a more detailed discussion.

<sup>87</sup> Moralee 2003, especially Chapter 2.

of the Roman state that was emphasized by the government more or less depending on cultural, political, and even epidemiological circumstance.

In order to illustrate the changing importance of public health in Roman politics, and the changing methods used in attempts to assure it, I synthesize three relatively well-worn sub-fields of Roman history that have so far remained discrete: first, the history of Roman hydraulic and sanitary engineering; second, Roman medical history, including especially the history of disease; and third, Roman political history. In particular I rely upon three separate threads of evidence: 1) state-funded water/sanitation infrastructure, 2) state responses to epidemic disease, and 3) the ways in which various forms of medical authority were officially recognized by the emperor and his administration. The resulting narrative is supplemented by cultural trends, including public interest in various types of medicine and the iconography of the goddess Salus, which caused her to be more and more closely identified with the Greek health deity Hygieia.<sup>88</sup>

Chapter two examines the responses of the Roman state to epidemic disease. Epidemics were regularly treated as portents and addressed religiously by means of official Senatorial rituals during the Republic, but never after Augustus until late antiquity. I argue that the Republican understanding of epidemics as a state religious problem was fundamentally a political phenomenon, predicated on the collective and intertwined nature of both government and religion in the Republic. The fall of the Republic meant not only a change in the structure of the Roman government, but also a change in the relationship between that government and the religious aspect of the health of the citizens. Starting

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<sup>88</sup> For this last line of evidence, I rely heavily on the literary and iconographical studies of Salus in Winkler 1995 and Marwood 1988.

with Augustus, official rituals regarding health and disease were conducted for the benefit of the imperial family alone, reflecting the position of the emperor between the citizens and the state gods.

Chapter three focuses on the political history of Rome's aqueduct system. As in the case of epidemic response, I argue that the fall of the Republic marked a turning point in both the symbolic and practical aspects of the aqueduct system. I find that the construction of aqueducts was competitive rather than collective in the Republican period, and that as a result the necessary upkeep of aqueducts was neglected, culminating in a water crisis in the late Republic. Against this background, Augustus' expansion and reorganization of the aqueduct system (through Agrippa) must be seen as a positive political statement, as well as a much-needed infrastructure upgrade that supplied the growing population of the capital with drinking water that, unlike well or Tiber water, was believed by medical authorities to actively promote health. After Augustus, I show how aqueducts remained an important symbol of the relationship between emperor and subject.

Chapter four focuses on the relationship between the Roman state and medical authorities both human and divine. While ancient medicine did not deal with questions of public health as a rule, the Roman state had substantial legislation about the practice and practitioners of medicine. While these laws generally restricted Greek-style medicine during the Republic, starting with Julius Caesar the Roman government encouraged physicians to practice in Rome and other major cities through tax incentives and in some cases the granting of citizenship. I also discuss the role of the state in increasing the popular visibility of certain physicians. The importance of the physical health of the emperor meant that imperial physicians worked under constant scrutiny, which resulted in

suspicion of them when emperors died of illness but also turned them into celebrities who could mold popular understandings of health and disease through medical fads. I also discuss here the relationship between Roman emperors and Asclepius, a god of Greek origin who was always closely identified with traditional Greek medicine. I argue that the degree to which the Roman state embraced and made use of Asclepius at different points was closely tied to political and religious concepts about Romanness, and can shed new light on the position and perceived value of professional physicians in the Roman world, as well as the precise relationship between the emperor and public health.

Chapter five centers on the degree to which Roman military medicine influenced health ideas and practices in the civic sphere. While historians of Roman health and medicine have frequently characterized the Roman army as the primary vector spreading Greek-style medicine across the Classical world, epigraphic and archaeological evidence suggests that innovations in the civic sphere may actually have come first and had a more far-ranging effect in the Roman provinces. In this chapter I also ask how the state-funded healthcare provided for soldiers, many of whom were not Roman citizens, fits into Roman concepts of public health when civilian citizens received no such provision. I suggest that useful comparanda might be found in the healthcare provisions made for public slaves and Vestal Virgins, both of whom had unique relationships to the imperial state.

Taken collectively, I argue that the evidence presented in the four thematic chapters reflects a period of a stable state ideology of public health dating from the dictatorship of Julius Caesar in the mid-first century BCE until the end of the second century CE. This model, which I refer to as the Principate Model, is characterized by three separate unprecedented phenomena:

- 1) A reconceptualization of the political meaning of aqueducts that found its greatest expression within the capital city, where maintenance became a permanent responsibility of the state and the emperor held a monopoly over the construction of new aqueducts. Outside Rome itself, aqueduct technology was promoted as a value of empire connected to urban health, and local elites were encouraged to develop smaller-scale versions of Rome's system.
- 2) An end to the treatment of epidemic disease as a state religious crisis, reflecting a shift away from the health of the citizen body and onto the body of the emperor as bellweather for the *pax deorum*.
- 3) The recognition of Greek-style medicine as an imperial asset by official state actions as well as public-facing actions of the emperor himself.

Furthermore, I argue that the Principate Model neither sprang out of nothingness nor disappeared into thin air, but that at either end of this stable period can be found a time of fundamental transition in terms of both ideas and practices (see Table 1.1 for chronology). The first transitional period dates between the mid-second century BCE and the fall of the Republic, while the second dates between the first outbreak of the Antonine Plague and the fifty-year stretch of civil war colloquially known as the Third Century Crisis.

Both of these transitional periods are familiar turning points in Roman political history. The start of the earlier period corresponds neatly to Rome's ascension to dominance in the Mediterranean, exemplified by Rome's dual military victories in Carthage and Corinth in 146 BCE, while its end matches up with the assassination of Julius Caesar in



44.<sup>89</sup> The latter transitional period, roughly 170-330 CE, covers a complicated stretch of Roman history. It begins with a few decades of political stability, devolves into a half-century of civil war that continued until 293, when Diocletian established the Tetrarchy. A fundamentally different form of imperial government than had ever existed in Roman history, the Tetrarchy brought peace but was short-lived. Only twenty years later, the empire was again embroiled in a civil war that changed the Roman world forever.

Constantine's victory over Maxentius resulted in the elevation of Christianity to the new state religion — and consequently a redefined relationship between the emperor and the religious arm of the state — as well as the establishment of Constantinople as the new seat of the empire, both developments that mark the start of a new model of public health that is perhaps most conveniently termed Byzantine.<sup>90</sup>

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<sup>89</sup> While it is certainly possible to argue that the Republic was not really dead until Octavian took the name Augustus in 27 BCE, by then he had already begun to implement an aggressive program of public health activity building on preliminary steps taken by his adoptive father Julius Caesar.

<sup>90</sup> With few exceptions, I do not discuss what I call the Byzantine model in this dissertation, nor do I spend much time in Transitional Period 2. This is not due to a lack of interest, but my own lesser degree of familiarity with the sources of the period and the limitations of time. A similar inquiry focusing exclusively on Late Antiquity would, however, be enormously productive. Much of the uniquely well-preserved papyrological evidence from Egypt that has been recognized for its potential applications for research into Roman demography dates to this period. The catalogue of textual evidence for plagues and famines in Stathakopoulos 2004 is a valuable tool on its own; this and other relevant aspects of the ancient sources have in recent years been greatly contextualized by the work on medicine, disease, and religion done by scholars including the members of the Working Group for Religion, Medicine, Disability, and Health in Late Antiquity (ReMeDHE, described by Heidi Marx-Wolf and Kristi Upson-Sala in their 2015 article in the *Journal of Late Antiquity*). Perhaps the most exciting and novel aspect of this period, however, is the wealth of material evidence coming from bioarchaeology and paleoclimatology, which — as shown by Michael McCormick in his 2015 and 2016 articles about Late Roman mass graves and Kyle Harper in his 2015 article and forthcoming book — complement the textual evidence of the period in ways of which a historian of the earlier Roman empire can only dream.

**Table 1.1. A proposed chronology of Roman public health<sup>91</sup>**

Republican Model	Before 150 BCE
Transitional Period 1	c. 150 – 44 BCE
Principate Model	44 BCE – c. 170 CE
Transitional Period 2	c. 170 – c. 330 CE
Byzantine Model	After c.330 CE

While the general outlines of the political and cultural narratives of the fall of the Republic and the birth of the Principate are well established, finding a single causal factor for the political turmoil of the third century has proved exceedingly difficult for historians. Instead, especially in recent years, substantial progress toward understanding what happened to the Roman state during and after the Severan dynasty has been made by historians who embrace the possibility of multiple contributing factors. These factors include not only political and cultural change, but also changes in the climate and disease ecology of the Roman world, of which our knowledge is constantly deepening thanks to advances in and increasing interdisciplinary communication about paleoclimatology and paleopathology.<sup>92</sup> As I discuss in my conclusion, I believe that these non-human factors, can in large part

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<sup>91</sup> An expanded version of this table summarizing the characteristics of the models can be found in Appendix 1.

<sup>92</sup> Harper 2017 (forthcoming) will be the most up-to-date and rigorous monograph to examine the current evidence for these topics in the late Roman and early medieval periods. Harris 2013 is an edited volume containing nine original, targeted papers on different aspects of the Roman environment.

explain the subtle but radical changes in Roman state performance of public health activity following the first outbreak of the Antonine Plague.

The political and social changes that occurred around the fall of the Republic in the first century BCE cannot, however, be so easily associated with the physical environment. We must look for an explanation for the emergence of the Principate model of public health primarily within the human sphere. Exactly where in the human sphere this explanation can be found is the focus of the central argument I make over the course of this dissertation. Specifically, I argue that the creation of a new model of public health coterminous with the rise of the Julio-Claudian dynasty that invested in urban aqueducts, embraced Greek medicine, and did not treat infectious disease as a religious crisis cannot be satisfactorily explained by the development of new technologies or the exposure to foreign ideas about health. To be sure, both hydraulic technology and Greek medical ideas are hugely relevant to Roman public health, and helped to set the limits of what was possible to achieve. But the underlying causal factor behind why and how this concept emerged when it did must be found primarily in the political sphere.

While my chapters have been organized by topic, it is also possible to divide the evidence into three types of action aimed at influencing collective health. The most concrete category, and the simplest to analyze historically, would be composed of legislation or edicts. In such cases, Roman state actors explicitly define a health-related issue and offer a solution. Some of these kinds of texts fall into the group that Rawcliffe and Geltner would describe as “prescriptive and normative,” such as the law mentioned by Frontinus prohibiting the private use of aqueduct-fed fountain runoff or the legal benefits offered to physicians in the early Principate. Also under this heading would fall the

senatorial epidemic expiations of the Roman Republic. The category of edicts, laws, and official senatorial action has the benefit of being the most likely to be recorded in Roman sources such as histories, annals, legal digests, and biographies, as well as inscriptions and ephemera such as papyri.

The second category, that of state investment in physical infrastructure projects, is largely limited to my chapter on aqueducts and sewers, although it could be argued that the construction of certain religious sites, such as the Asclepius sanctuary on the Tiber Island, at least partially count. These actions can be mentioned in histories, biographies, and inscriptions as well, but also produced physical evidence that can be studied archaeologically. When described in textual sources, such actions often included a justification as to the utility of the project for public health – for example, Pliny’s letter to Trajan about the uncovered sewage ditch in Amastris, or Frontinus’s descriptions of the construction and renovation of the Republican aqueducts.

The third and most abstract category is that of the engagement with and appropriation of a preexisting language and iconography of health and medicine by non-medical state actors, including the senate, the emperors, and the emperors’ administrations. The evidence for this is largely art-historical and numismatic due to the preponderance of health-related imagery on Roman coinage, but appears with some frequency as well in literature and can overlap with the previous two categories. For example, when Pliny the Younger and Trajan discuss infrastructure projects in provincial cities, it is possible to analyze the projects themselves as part of the second category, but the language used (e.g., “salubritati et amoenitati”) and value placed on the projects by the two men as something different, if complementary. In the case of the Roman state’s relationship with Asclepius, to

give a second example, I understand the initial senatorial mission to bring the god to Rome to be part of the first category, but Caracalla's unprecedented use of Asclepius on imperial coinage to be part of the third.

Such diverse groups of evidence require a preponderance of different skills and methodologies to analyze. I have intended for the examples on which I focus to be case studies, and selected them because they have all been studied extensively, if in more circumscribed ways. This has allowed me to focus more on the connections between these examples and the state, rather than more foundational work. There are many other topics that could have been included, such as state engagement with the reproduction of Roman citizens and laws regarding burial. I have also, for the sake of brevity, limited my geographical focus to the area directly around the seat of Roman power, which for my time period is Rome (arguable exceptions, such as the Amastris ditch and imperial-era coins from Pergamum, have firm connections to the person of the emperor).

There are many fruitful opportunities for extending the type of analysis I have performed here outside of this narrow geographical range. A recent study of lead isotopes in the aqueducts of Neapolis, for example, suggests administrative delays in the reconstruction of the Campanian water systems following the earthquake and volcanic eruption that occurred during the Flavian period and would make a highly valuable contribution to my thesis.<sup>93</sup> It would also be extremely useful to compare the trends in public health identified in my narrative to similar trends in other major cities of the Roman world, particularly Alexandria, Pergamum, and Athens. In order to properly assess the

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<sup>93</sup> Delile et al. 2016.

influence of Roman thought and policy in these cities, however, much more work must be done on the public health of Hellenistic and earlier periods.

Also absent from my study are the many healing authorities, divine and human, that do not fit into the broadly Asclepian-Hippocratic tradition. We know from the letters of Pliny the Younger that certain other healthcare providers could, like mainstream physicians, be granted citizenship on the basis of the successful treatment of an important enough Roman.<sup>94</sup> Some practitioners had strong ethnic and regional connotations similar to the Greekness of the *iatros/medicus*: Pliny the Elder mentions an influx of Egyptian specialists in the wake of an outbreak of a skin disease at Rome, as well as a number of “magi” from the non-Greek East. Other exotic healing gods, too, sometimes appear in Roman political contexts. As Rowan discusses, Caracalla seems to have had a special interest in Apollo Grammus and Sarapis in addition to Asclepius, albeit one that was advertised to a lesser extent within Rome itself.<sup>95</sup> Both of these deities do have a Greek or Hellenistic aspect to them, but neither is analogous to Asclepius in terms of having a clear and consistent association with professional physicians.

There have been numerous more detailed studies of many of the discrete bodies of evidence I have examined, ranging from aqueducts to Salus coins to ritual expiations. The ultimate aim of this project is not to supplant any one of these, but rather to lay groundwork for the discussion of Roman public health in a way that is useful and accessible for both Roman historians and historians of public health systems throughout history. In order to do so, my most important category of evidence – nebulous as it is – is the

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<sup>94</sup> Mattern 1999.

<sup>95</sup> Rowan 2012.

connections between and among these diverse bodies of evidence. In other words, the common thread, and the foundation of my argument, is the presence or absence of official state action in different arenas of collective health at different points in Roman political and cultural history. The result is an original historical narrative about the role of health in Roman politics, one that should be of interest not only to historians interested in public health but also to those who work more broadly on the power of symbols and language in Roman political discourse and public life.

#### **IV. A note on definitions: the Roman state and Roman medicine**

When discussing individual actions throughout this dissertation, I have taken care to identify the specific agents, who are usually the Senate as a legislative and ritual body, individual magistrates acting within the purview of their offices, and the emperors. For the purposes of synthesizing these cases into a sustained historical discussion, however, I use the term “state” in full awareness that it is a word that becomes harder to define the more it is questioned. From the perspective of a modern social scientist, because I do not discuss international relations but instead focus on internal processes, I ought to use the word “government” instead.<sup>96</sup> For the Roman world, however, this does not seem quite right. First, the Romans maintained some deeply important official institutions over the course of multiple radically different governments. Second, it is nearly impossible to isolate the Roman government from other institutions: priestly colleges, for example, played a central role of in the operation of the state and were largely composed of Senators who would not themselves have considered their legislative work more important to the state than their

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<sup>96</sup> Robinson 2013.

ritual work. Many historians adopt Max Weber's definition that hinges on the monopoly on the use of force, but for the purposes of the current study I define the state as the body of enduring and overlapping institutions that, while they changed in form and relative power, justified their own existence as ensuring the prosperity and security of the Roman public through the organization and oversight of collective religious, civic, and military action.

Roman medicine, too, is a deceptively simple term. In this dissertation I focus on two important institutions of Roman health: professionally trained physicians (*medici* or *iatroi*) and the sanctuaries of the Greco-Roman healing deity Asclepius. These were, however, far from the only options for Romans seeking medical care. In the mortal realm, the "medical marketplace" included (among others) surgeons, drug-sellers, midwives, Asian magi, and the type of traditional Roman folk medicine described by writers from Cato the Elder to Pliny the Elder, which was to be performed not by a professional but, ideally, by a household's *paterfamilias*.<sup>97</sup> For religious healing, the field was even more crowded. The widespread practice of dedicating anatomical votives at local Italian healing sanctuaries long before the introduction of Asclepius to Italy is just one piece of evidence that Latin deities by no means needed to be primarily associated with medicine in order to have a healing aspect.<sup>98</sup> With the growth of empire, a number of new healing deities were also introduced to the broader Roman pantheon, and were sometimes syncretized with Roman deities that had previously had little or no connection to healing.<sup>99</sup> The absence of these types of healing in this dissertation is by no means meant to suggest that they did not

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<sup>97</sup> On the historiographical origins of the term "medical marketplace" in the mid-1980s, see Jenner and Wallis 2007. In the context of specifically Roman medicine, Nutton 1992 is the classic articulation.

<sup>98</sup> See, most recently, Draycott and Graham 2017.

<sup>99</sup> A classic example is the Romano-British Sulis Minerva, who took aspects of the Roman Minerva and the Celtic Sulis, who was especially associated with the healing springs at Bath.



interact with the Roman state in ways relevant to public health. None, however, has as rich and consistent an ancient evidentiary base as do Greek professional medicine and the Asclepius cult. By focusing exclusively on these two institutions here, I hope to isolate and describe a model of Roman state interaction with medicine that can be productively applied to the rest of the medical marketplace.

## Epidemics, Religion, and the Roman State

After [Cato], one only of our distinguished men has tried his hand at the subject [of medicinal plants], Gaius Valgius [*cos. 12 BCE*], an author of approved scholarship, who left unfinished a work dedicated to the divine Augustus, beginning also his preface with a devout prayer that the most powerful princeps should always, and above all others, be the healer of every human ill.<sup>100</sup>

The above passage, from one of Pliny the Elder's discourses on the history of medicine, explicitly links the emperor Augustus with the vocabulary of healing. While the word *malum* was already a standard term for disease in the first century, it also meant "bad thing" more generally and is often translated into English as "evil."<sup>101</sup> *Medeor*, a more explicitly medical term, was likewise used metaphorically by Cicero, Caesar, and Tacitus in the sense of remedying a political or legal issue.<sup>102</sup> Still, especially in the context of the medical topic of the dedicated volume, I argue that we should read this small fragment of Valgius as evidence for a fundamental change in the relationship between state and physical health in the early Principate that was intrinsically connected to the invention of the office of emperor, the marginalization of the Senate, and the ongoing integration of the Mediterranean world into the conception of Romanness.

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<sup>100</sup> Pliny the Elder, *NH* 25.2.4: "Post eum unus inlustrium temptavit Gaius Valgius eruditione spectatus imperfecto volumine ad divum Augustum, inchoate etiam praefatione religiosa ut omnibus malis humanis illius potissimum principis semper mederetur maiestas."

<sup>101</sup> Langslow 2000, 157 on Celsus' use of *malum*.

<sup>102</sup> A few examples among many: Cicero, *De imperio Cn. Pompei* 9.26; *In Verrem* 2.1.12; Tacitus, *Annales* 4.16 and 6.11; Caesar, *De bello gallico*, 5.24.6.

One significant locus of change, and the focus of this chapter, is the way the Roman state responded to epidemic disease throughout Roman history. Due to their collective nature, epidemics were a special class of disease that did not easily fit within the purview of standard professional medicine. They also posed a potential threat to the state in terms of loss of life and the weakening of manpower that far surpassed any other public health issue except, perhaps, long periods of low fertility. At the same time, exactly how Romans responded to epidemic disease was heavily shaped by political circumstance.

### **I. Epidemics and Roman medicine**

From modern interpretations of ancient descriptions of clusters of symptoms, we understand that Romans experienced a wide range of infectious diseases, from tuberculosis to leprosy.<sup>103</sup> The disease landscape of classical antiquity was, however, in many places, including the western seaboard of Italy, dominated by malaria.<sup>104</sup> Malaria in humans is caused by several different parasitic protozoa, which in turn are spread by various species of mosquito.<sup>105</sup> Three of these strains of malaria, *Plasmodium vivax*, *P. malariae*, and *P. falciparum*, are known to have been present in the Mediterranean in historical times. All strains present characteristic fevers that correspond neatly to the various classifications of

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<sup>103</sup> Jackson 1988, 179-185.

<sup>104</sup> On the concept of dominant pathogens in history, see the literature on pathocenosis starting with Grmek 1989. On malaria in the Roman period, see Sallares 2002.

<sup>105</sup> See Sallares 2002, 7-22 for a comprehensive overview of the various types of malaria and their vectors in the Mediterranean.

fever reported by Greek and Roman medical writers, and heavily influenced their conception of disease.<sup>106</sup>

The Roman medical writer Celsus<sup>107</sup> wrote that while the ultimate cause of disease was always an imbalance within the patient himself, certain environmental conditions like extreme heat could weaken the body and make it more susceptible to an epidemic.<sup>108</sup> His advice for protecting oneself in an epidemic (he uses the term *pestilentia*) recognizes both the presence of an outside cause and the ultimate responsibility of the patient's own body for susceptibility to disease. Best of all was to get far away from the outbreak; if this was impossible, Celsus recommended a regimen of limited activity and moderation in food and drink in order to best preserve the patient's health.<sup>109</sup> For a patient with a pestilential fever, Celsus could recommend no single course of action.<sup>110</sup> The physician was to consider bloodletting, one of the usual treatments for fever, and proceed according to the strength of the patient. For weak patients (including children), the physician was to try other fever

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<sup>106</sup> All types of malaria produce a quotidian (daily) fever in the first infection. In relapses of survivors of a first infection, which can occur anywhere from a few weeks to several years after the primary infection, the less lethal *P. malariae* produces what ancient writers referred to as a quartan fever (meaning fever recurring every third day), while the mild *P. vivax* and dangerous *P. falciparum* produce tertian (every other day) fevers. It is possible for a human to host several types of malaria at the same time, which likely contributed to the importance of the quartan/tertian distinction in ancient medicine.

<sup>107</sup> While it has been argued that Celsus was a practicing physician, he never calls himself a *medicus* and medicine was only one of several subjects about which, as an encyclopedist, he knew a great deal. For an expansion of this argument, see Nutton 2012, 166 and 374 n.66.

<sup>108</sup> Celsus 1.9.6; see also 2.1.9 for the belief that autumn was an especially pestilential season.

<sup>109</sup> Celsus 1.10.1-4.

<sup>110</sup> Celsus 3.7.

remedies like clysters (enemas) and mild fasting, despite Celsus' warning that these treatments were 'practically useless' (*utile minime*) in pestilential fevers.<sup>111</sup>

In the medical books of his *Natural History*, Pliny the Elder included several folk recipes for protection against pestilence, but nothing in the way of treatment for those who did become sick.<sup>112</sup> Like Celsus, Pliny's sources were more confident in their ability to stave off infection than in their ability to treat someone who had fallen ill during an epidemic. More illuminating is Pliny's epidemiological study of a disfiguring skin disease called lichen or mentagra.<sup>113</sup> Though not fatal, lichen was understood to be a new disease at Rome when it struck in the first century, and one directly associated with Rome's imperial expansion. Pliny was most interested in the epidemiology of the disease: according to him, it spread among high-ranked men as a result of their custom of kissing each other. Women and people of the lower classes were unaffected. Traditional physicians treated the disease by cauterizing the lesions, which disfigured the patients further and was often ineffectual.

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<sup>111</sup> Celsus 3.7.1.

<sup>112</sup> To avoid falling sick during a pestilence, Pliny recommended filtering air with Delphic laurel (*NH* 23.80), drinking an artificial wine called *bion* (*NH* 23.26), eating aron (*NH* 24.92), and drinking myrrh (*NH* 24.97).

<sup>113</sup> Pliny *NH* 26.3: "Non fuerat haec lues apud maiores patresque nostros et primum Ti. Claudi Caesaris principatu medio inrepsit in Italiam quodam Perusino equite Romano, quaestorio scriba, cum in Asia adparuisset, inde contagionem eius inportante. nec sensere id malum feminae aut servitia plebesque humilis aut media, sed proceres veloci transitu osculi maxime, foediore multorum, qui perpeti medicinam toleraverant, cicatrice quam morbo. causticis namque curabatur, ni usque in ossa corpus exustum esset, rebellante taedio. adveneruntque ex Aegypto, genetrice talium vitiorum, medici hanc solam operam adferentes magna sua praeda, siquidem certum est Manilium Cornutum e praetoriis legatum Aquitanicae provinciae HS CC elocasse in eo morbo curandum sese. accidit quoque saepius, ut nova contra genera morborum gregatim sentirentur. quo mirabilius quid potest reperiri? aliqua gigni repente vitia terrarum in parte certa membrisque hominum certis vel aetatibus aut etiam fortunis, tamquam malo eligente, haec in pueris grassari, illa in adultis, haec proceres sentire, illa pauperes!"

Accordingly the patients turned to Egyptian healers “who devoted all their attention to this complaint only.”

Pliny’s description of lichen is clear evidence that the conception of contagion existed alongside the formally more rigid conception of disease that looked to the interaction of individual constitutions with the intrinsic properties of a place.<sup>114</sup> Although this latter idea dated at least to the earliest texts in the Hippocratic corpus, the classic Roman articulation is Vitruvius’ advice on selecting land for a new city.<sup>115</sup> Vitruvius begins this section as follows:

In setting out the walls of a city, the choice of a healthy situation is of the first importance. It should be on high ground, in neither a foggy nor rainy region; its aspects should be neither hot nor cold, but temperate in both respects. The neighbourhood of a marsh must be avoided, for in such a site the morning air, uniting with the fogs that rise in the neighbourhood, will reach the city with the rising sun; and these fogs and mists, charged with the exhalation of the marsh beasts, will diffuse an unhealthy effluvia over the bodies of the inhabitants, and render the place pestilent.<sup>116</sup>

Rome itself is described as both healthy and unhealthy in ancient texts. When Cicero called Rome “a healthy place in a pestilential region,”<sup>117</sup> he was referring specifically to the hills on which the elite lived. The valleys, including the valley in which the Forum Romanum lay,

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<sup>114</sup> On the concept of contagion in ancient medicine, see Nutton 1983 and Leven 1993.

<sup>115</sup> Vitruvius, *De architectura*, 1.4.1-12.

<sup>116</sup> Vitruvius, *De architectura*, 1.4.1: “In ipsis vero moenibus ea erunt principia. primum electio loci saluberrimi. is autem erit excelsus et non nebulosus non pruinosus regionesque caeli spectans neque aestuosas neque frigidas sed temperatas, deinde si vitabitur palustris vicinitas. cum enim aerae matutinae cum sole oriente ad oppidum pervenient et his ortae nebulae adiungentur spiritusque bestiarum palustrium venenatos cum neula mixtos in habitatorum corpora flatu spargent, efficient locum pestilentem.”

<sup>117</sup> Cicero, *De re publica* 2.11: “locum ... in regione pestilenti salubrem.”

were malarial in the summers despite the drainage effects of the Cloaca Maxima. Horace and Juvenal (perhaps speaking somewhat metaphorically, but certainly in a way that relied on literal beliefs) both refer to the capital as a pestilential place.<sup>118</sup> In any case the seasonal pattern of disease in Rome would have affected different social groups differently. Native Romans, infected for the first time as children, would have built up some natural immunity to the disease. Immigrants, including many slaves who moved to Rome as adults, would probably have suffered the heaviest mortality. The wealthy, who lived on the relatively mosquito-free hills, could also escape to summer villas in healthier locations and potentially avoid yearly re-infection. While the hills would not necessarily provide any protection to the elite during outbreaks of diseases other than malaria, leaving the city and waiting out an epidemic, as Celsus recommended, was a reliable option for those with the financial resources.

The Roman medical writer most famously associated with epidemic disease is Galen, who lived through the so-called Antonine Plague in the second half of the second century CE. Galen's account of the symptoms is crucial to the now largely accepted identification of the plague as smallpox.<sup>119</sup> Though Galen wrote about his successful treatment of plague patients in later outbreaks of the disease, his initial reaction was to do exactly as Celsus suggests.<sup>120</sup> When the plague reached Italy from the East in 166 CE, Galen fled Rome

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<sup>118</sup> Horace, *Epist.* 1.7.8-9, Juvenal, *Sat.* 4.56-7.

<sup>119</sup> See Gourevitch 2013, 66-74, for an up-to-date bibliography on the identification of the Antonine Plague; especially important are Littmann and Littmann 1973 and Sallares 1991.

<sup>120</sup> Later treatment of patients (probably in 174 CE): Galen, *De methodo medendi* V 12 = K. X 360-367.

(where he had spent three years) for his hometown of Pergamum.<sup>121</sup> Galen wrote that the fear and uncertainty he felt regarding the plague was common to all doctors who encountered it, suggesting that other medical practitioners may also have fled rather than attempting to stop the plague using medical tools.<sup>122</sup>

Throughout Roman medical texts runs the common theme that stopping an epidemic disease was something outside the domain of a traditional physician. This was the case even when the mechanisms of disease in the patient were understood to be natural, e.g. the result of a pestilential place or air, or of human-to-human transmission. When a physician did become involved, as Galen did in many cases during later outbreaks, it was only on an individual scale. Even then, the physician had little faith in his usual remedies.

## **II. Roman epidemics in histories of the Republic**

While epidemics were a difficult fit in mainstream Roman medicine, they were a major and perennial concern of city dwellers and local governments throughout and beyond antiquity. Perhaps the most famous example of an urban plague in Classical literature is the Thucydides' narrative of the outbreak of the Athenian Plague at the beginning of the Peloponnesian War in the fifth century, which Athenian authorities chose to address by seeking advice from an oracle.<sup>123</sup> Centuries later, epigraphic evidence shows that several

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<sup>121</sup> Galen, *De libris propriis* 1 = K. XIX 15.

<sup>122</sup> Galen, *De praes. ex pulsibus* III 4 = K. 357.

<sup>123</sup> Thucydides 2.47-54. The oracle's response is interpreted by Pericles' enemies to mean that Pericles invited the plague when he pushed for war against the Dorians; in Plutarch's *Life of Pericles* 34.3-4 Pericles is also criticized for worsening the plague by overcrowding the city.



cities in Asia Minor similarly turned to oracles for instruction when the Antonine Plague first struck in the middle of the second century CE.<sup>124</sup>

Although Thucydides only describes how one individual epidemic was interpreted and addressed by the Athenian state, his text (along with Plutarch's description of the same epidemic in his *Life of Pericles*) has been cited as evidence for contemporary Athenian popular and political ideas about epidemic disease.<sup>125</sup> In contrast, accounts of two dozen separate epidemics that struck the city of Rome between the fifth and second centuries CE are preserved in ancient sources, mostly in the writings of Livy and Dionysius of Halicarnassus. Though they differ in length and detail, many of these accounts include short descriptions of popular and political reactions. Cassius Dio also records two Roman epidemics, one in the very late Republic and one in the early Augustan period, which I will discuss separately as they merit special attention.

The twenty-four epidemics included in this study date from 472 to 142 BCE.<sup>126</sup> The sources explicitly describe seventeen (perhaps eighteen) of them as portents or prodigies

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<sup>124</sup> Gourevitch 2013, 85-95. has a comprehensive overview of all epigraphic possible attestations of the Antonine Plague, including both well-supported cases and more conjectural ones. See also Graf 1992.

<sup>125</sup> Longrigg 1992 and Mikalson 1984.

<sup>126</sup> I compiled the list of epidemics in Appendix 2 with reference to the one in Northwood 2006, 86, with some substantial changes. I omitted any epidemic that did not occur within Rome itself (so, for example, I did not consider the epidemic in 466 that struck Roman soldiers campaigning against the Aequi), as these do not seem to have ever been of religious concern to the Senate. Northwood also limited his line of inquiry to Livy, so the two epidemics that appear in Dio Cassius do not appear on his list, nor does the first epidemic covered by Dionysius of Halicarnassus. Several of the listed epidemics also appear in Orosius' *Historiae adversus paganos*, Zonaras' *Epitome historiarum*, and Julius Obsequens' *Liber prodigiorum*, but as these much later writers provide no information beyond what is in Livy's text, I do not consider them below as separate sources except when Livy's text is missing, as in 266 (for which Augustine is also a source), 165, and 142.

— that is, they were interpreted by state political and religious authorities as communication from the gods of the state indicating that the Romans had done something offensive to them.<sup>127</sup> Procedurally, this meant that the Senate passed them on to a college of priests, usually the *decemviri sacris faciundis*, but sometimes others, to be interpreted and properly expiated.<sup>128</sup> Among the epidemics not officially deemed prodigies, seven were addressed by means of other religious or ritual action by the Senate, apparently without the help of the *decemviri* or another college. In only three of the epidemics mentioned in Livy did the Senate not attempt any sort of expiation.<sup>129</sup> Epidemics thus form a major class of events that could be interpreted as a prodigy in republican Roman religion.<sup>130</sup>

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In their study on the periodicity of epidemic disease in Roman history, Paine and Storey 2008 do not count plagues in consecutive years (e.g. 181 and 180) as discrete epidemics; I have chosen to keep these separate when they resulted in multiple expiations.

<sup>127</sup> Rasmussen 2003 is the most comprehensive study of the various subclasses of portents interpreted during the Republic, and the various priestly colleges that interpreted them.

<sup>128</sup> On the development of the *decemviri sacris faciundis*, see Boyce 1938.

<sup>129</sup> Those of 453, 412, and 384 were not expiated.

<sup>130</sup> Various arguments have been put forth regarding the reliability of the entire corpus of prodigies and expiations present in Livy and his epitomizers. The most vocal detractor was Elizabeth Rawson (Rawson 1971), who argued that we must be sceptical of the value of the lists of prodigies because they may have come not from a central list kept by the Senate, because many came from various local communities not yet under Roman rule at the time of their reporting. According to Rawson's argument, the early Roman antiquarians and historians who later collected these records may have misunderstood who reported and who reacted to such prodigies, and so falsely attributed these actions to the Roman Senate when in fact they should have been attributed to local authorities. The argument hinges on a passage in Livy (43.13) in which the Senate refused to interpret a portent reported in Fregellae because the city lay outside the *ager Romanus*. Since Rawson, several historians have raised the counter-argument that the presence of portents reported outside Rome's territory does not preclude the possibility of a centralized list, or even the possibility of those portents being interpreted within Rome. According to MacBain, the Senate's refusal of the Fregellae portent in Livy 43.13 was politically motivated rather than a matter of rule, and reflected strained relations between Fregellae and Rome. Instead, MacBain argues that

The major historians' accounts differ in tone and content. Livy provides substantially more evidence by volume, describing twenty-two cases. His focus is above all on the status of each epidemic as an official prodigy and on the senatorial response, which usually took the form of religious expiations intended to bring the epidemics to an end. Dionysius on the other hand only describes five cases, four of which also appear in Livy. Whereas Livy's accounts of epidemics are mostly procedural, Dionysius' are more vivid in detail, include disease symptoms, and focus on the social disruption caused by the epidemics.

The earliest reported Republican epidemic took place in 472. According to Dionysius of Halicarnassus, who is the only source for this epidemic, the victims of the disease were primarily pregnant women who miscarried and then died. Dionysius describes both public and private religious reactions, neither of which seemed to have any effect.<sup>131</sup> The epidemic was finally brought to an end when the pontiffs discovered that a Vestal virgin had been unchaste. After the execution of the virgin and her two lovers, the epidemic ended and, apparently, senate and citizens alike were satisfied that the epidemic had been properly handled.

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Rome generally took an active interest in the religious life of the *ager peregrinus* during its period of expansion within Italy, and that the Roman Senate did regularly interpret portents for other communities. Regarding epidemics as prodigies, Northwood recently analysed the pattern of epidemic and grain scarcity (which frequently appear together) in Livy, concluding that “[i]ndividual pestilences and grains scarcities will always be open to suspicion, but the overall pattern ought not to be. Fabrication may be present [in Livy’s accounts of such events], but it is not the dominant feature” (Northwood 2006, 81–92).

<sup>131</sup> Dion. Hal., *Antiquitates romanae* 9.40.2: “...καὶ οὔτε λιτανεῖαι πρὸς ἔδεσι καὶ βωμοῖς γινόμεναι θεῶν, οὔτε καθαρτήριοι θυσῖαι περὶ τε πόλεως καὶ οἴκων ἰδίων ἐπιτελούμεναι παῦλαν αὐταῖς ἔφερον τῶν κακῶν.”

The next epidemic took place in 463 and was described by both Livy and Dionysius.<sup>132</sup> Dionysius reports very heavy casualties across all social classes, and notes that the Senate was especially heavily hit, with both consuls and many other magistrates dying.<sup>133</sup> Unable to mobilize an army because of the number of sick and dead, the Senate sent word to its allies the Hernici that Rome would be unable to send help against the Aequi and Volscians because “through the sudden anger of gods, the city of Rome was being ravaged by disease.”<sup>134</sup> This epidemic was, in other words, understood to have been caused by a break in the *pax deorum*, which made it an issue of state concern.<sup>135</sup> As such, state action took the form of religious propitiation; all Romans, rich and poor, male and female, were ordered to report to the temples and pray for the pity of the gods in the first recorded *supplicatio*.<sup>136</sup> At this point the authorities directing the religious response to epidemic disease appear to have been the consuls themselves, and the public religious action was more or less disorganized, even if it was officially prescribed.

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<sup>132</sup> Livy 3.6-8, Dion. Hal. 9.67, 9.69.

<sup>133</sup> Dion. Hal. 9.67.2.

<sup>134</sup> Livy 3.6.5: “...urbem Romanam subita deum ira morbo populari...”

<sup>135</sup> For a synopsis of Senatorial procedure regarding the annual reportage and expiation of prodigies, see Pina Polo 2011, as well as Rasmussen 2003.

<sup>136</sup> Livy 3.7: “et per ignota capita late vagata est vis morbi, inopsque senatus auxilii humani ad deos populum ac vota vertit. Iussi cum coniugibus ac liberis supplicatum ire pacemque exposcere deum, ad id quod sua quemque mala cogeant auctoritate publica evocati omnia delubra implent. Stratae passim matres, crinibus templa verrentes, veniam irarum caelestium finemque pesti exposcunt. Inde paulatim, seu pace deum impetrata seu graviore tempore anni iam circumacto, defuncta morbis corpora salubriora esse incipere...”

The epidemic of 451 is described by both Livy and Dionysius as especially severe and disruptive both to military activity and to agriculture.<sup>137</sup> While Livy's description is very short and includes no description of the senatorial or popular response, Dionysius' account includes a description of popular panic. At first the sacrifices and expiations were in line with state religion, but when the epidemic continued, the people began to experiment and "unseemly practices not customary with [the Romans] were introduced into the worship of the gods." When the new rituals also failed to end the epidemic, Dionysius claims that the people "abandoned even the observance of religious rites."<sup>138</sup> Dionysius' description of the popular reaction to this epidemic is also noteworthy because it is not restricted to religious action, but includes an account of the difficulties Romans faced in caring for the sick due to the extremely contagious nature of the disease, and in disposing of the dead, of whom there were too many to cremate. Dionysius does not describe any senatorial attempts to address these aspects of the epidemic, such as quarantine or an organized program of corpse removal.<sup>139</sup>

Livy's accounts of the epidemics of 436 and 433 show some development in the state response to epidemic disease.<sup>140</sup> In both cases men and cattle died, endangering both military manpower and the civic food supply. In the epidemic of 436, for the first time the

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<sup>137</sup> Livy 3.32, Dion. Hal. 10.53.1-10.54.2.

<sup>138</sup> Dion. Hal. 10.53.5-6: ὅσον μὲν οὖν χρόνον τοῖς πολλοῖς ἐλπίδος τι ὑπῆν ὡς τοῦ θεοῦ σφίσιν ἐπικουρήσοντος, ἅπαντες ἐπὶ τε θυσίας καὶ καθαρμούς ἐτράποντο: καὶ πολλὰ ἐνεωτερίσθη Ῥωμαίοις οὐκ ὄντα ἐν ἔθει περὶ τὰς τιμὰς τῶν θεῶν ἐπιτηδεύματα οὐκ εὐπρεπῆ. ἐπεὶ δὲ ἐπέγνωσαν οὐδεμίαν αὐτῶν ἐπιστροφὴν ἐκ τοῦ δαιμονίου γινομένην οὐδ' ἔλεον, καὶ τῆς περὶ τὰ θεῖα λειτουργίας ἀπέστησαν.

<sup>139</sup> Dion. Hal. 10.53.1-3.

<sup>140</sup> Livy 4.21.2-6, 4.25.

religious response was coordinated by a specific college, the *duumviri sacris faciundis*. The next year, in 435, the epidemic continued and military action was suspended. The Roman populace (along with its livestock) was ravaged yet again in 433, and again the duumvirs organized the religious response “to appease the wrath of the gods.” This time, however, the Senate took secular action as well, setting aside grain in anticipation of a famine.<sup>141</sup> It is perhaps not surprising that this provision shows a clear understanding of a common indirect effect of epidemic in an agricultural community: illness or death among the farmers led to missed planting seasons or harvests, which disrupted the agricultural cycle and could mean famine. Rather, it is notable that the Senate here took on the responsibility of protecting the city of Rome from the possibility of famine. Livy tells us that this preventative measure was employed again in 412.<sup>142</sup> Also during the course of the 412 epidemic, the consul Gnaeus Iulius Mento vowed a temple to Apollo Medicus (Apollo the Doctor), for the first time recognizing a foreign cult for the express purpose of safeguarding citizens’ health.<sup>143</sup>

During the epidemic of 428, which Dionysius of Halicarnassus describes as a painful and deadly skin affliction, no senatorial expiation is recorded.<sup>144</sup> The popular reaction was characterized by a rejection of traditional Roman rituals in favor of foreign ones introduced

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<sup>141</sup> Livy 4.53.3: “Famem quoque ex pestilentia morbo implicitis cultoribus agrorum timentes in Etruriam Pomptinumque agrum et Cumas, postremo in Siciliam quoque frumenti causa misere .... Eo anno vis morbi levata neque a penuria frumenti, quia ante provisum erat, periculum fuit.”

<sup>142</sup> Livy 4.52.

<sup>143</sup> Livy 4.25.

<sup>144</sup> Livy 4.30, Dion. Hal. 12.9.

by “pretend fortunetellers.” In response, “the aediles were instructed to ensure that only Roman gods were worshipped, and only in the established way.”<sup>145</sup> For the rationale behind this forceful senatorial response to the organized popular reaction to the epidemic, a helpful point of comparison is the Bacchanalia crisis of 186, in which the Senate outlawed unauthorized participation in Bacchus cults in Rome and its territories.<sup>146</sup>

In 399, the Senate again looked for an end to the epidemic in religion.<sup>147</sup> This is itself unsurprising, but here for the first time Livy suggests that not all epidemic diseases that struck the city of Rome were treated as evidence of a rupture in the *pax deorum*.<sup>148</sup> In this case the *duumviri* claimed to have discovered by means of the Sibylline books that the gods desired the Romans to perform a new ritual, the *lectisternium*, in response to the epidemic. The *lectisternium*, a ritual feast for cult statues of various gods, went on to become a commonly prescribed expiation for prodigies of all types. It was used again in 365 in response to an epidemic, in 326 for an unspecified reason, and in 218 and three separate times in 217 in response to various non-epidemic prodigies.<sup>149</sup>

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<sup>145</sup> Livy 4.30.9-11: “nec corpora modo adfecta tabo, sed animos quoque multiplex religio et pleraque externa invasit novos ritus sacrificandi vaticinando inferentibus in domos, quibus quaestui sunt capti superstitione animi, donec publicus iam pudor ad primores civitatis pervenit cernentes in omnibus vicis sacellisque peregrina atque insolita piacula pacis deum exoscendae. Datum inde negotium aedilibus, ut animadverterent ne qui nisi Romani di neu quo alio more quam patrio colerentur.”

<sup>146</sup> Livy 39.17-18, CIL I(2).581. See also North 1979.

<sup>147</sup> Livy 5.13-14, Dion. Hal. 12.9.

<sup>148</sup> This was remarked but not expounded upon by Northwood 2006, 84 n.19.

<sup>149</sup> *Lectisternia* were also celebrated without the involvement of the Senate, as during the reign of Marcus Aurelius (SHA *Marcus Aurelius* 13.2).

Livy's description of the epidemic of 392 provides a brief example of the decision-making process of the Senate in an epidemic that was not treated as a prodigy.<sup>150</sup> This epidemic caused serious disruption to the functioning of the state. Military activity was stopped, at least until the city itself was attacked, a censor died, and both consuls were forced out of office by a *senatus consultum*, officially because they had contracted the illness.<sup>151</sup> The interrex, M. Furius Camillus, went on to appoint six consular tribunes with the ostensible reasoning that not all of them could fall sick at once.<sup>152</sup>

The extended epidemic of 365–363 is remarkable both for its length and for the various official attempts made to stop the disease.<sup>153</sup> From the beginning, there were heavy casualties both among the magistrates and among the common people. When the epidemic entered its second year, the Senate began attempting 'to secure the peace of the gods' with traditional rituals. When these failed, the people again turned to foreign religion, as in 428, but now apparently with the cooperation of the Senate. This time, Livy is more forthcoming

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<sup>150</sup> Livy 5.31: "Eodem anno novum bellum cum Volsiniensibus exortum; quo propter famem pestilentiamque in agro Romano ex siccitate caloribusque nimiis ortam exercitus duci nequivit. Ob quae Volsinienses Sappinatibus adiunctis superbia inflati ultro agros Romanos incursavere; bellum inde duobus populis indictum. C. Iulius censor decessit; in eius locum M. Cornelius suffectus—quae res postea religioni fuit quia eo lustrum Roma est capta; nec deinde unquam in demortui locum censor sufficitur—consulibusque morbo implicitis, placuit per interregnum renovari auspicia. Itaque cum ex senatus consulto consules magistratu se abdicassent, interrex creatur M. Furius Camillus, qui P. Cornelium Scipionem, is deinde L. Valerium Potitum interregem prodidit."

<sup>151</sup> 393 and 392 were in fact the only two years between 408 and 367 in which consuls were elected. Otherwise, consular tribunes headed the state. Until the passage of the *Lex Licinia Sextia* in 366, the plebeian order was barred from holding a consulship, but not a consular tribunate. The replacement of consular elections with elections of consular tribunes thus allowed members of the plebeian order to access the highest offices.

<sup>152</sup> In fact, six consular tribunes had been the norm since 405.

<sup>153</sup> Livy 7.1-3.



about the nature of the imported rites: the Roman people sent for ritual performers from Etruria, who sang, danced, and acted out bawdy scenes. This experimental attempt to appease the gods again failed, and the next year the Senate tried yet another rite, appointing a ritual dictator to “drive a nail,” presumably into the doorpost of the temple of Jupiter on the Capitoline.<sup>154</sup>

The epidemic of 293 resulted in the Senate deciding to bring the Greek healing god Asclepius to Rome<sup>155</sup> after ordering a consultation of the Sibylline Books, which had become a normal course of action when interpreting a prodigy. No details about the epidemic itself are given, however, except that it “raged in the city and country districts alike.”<sup>156</sup> Because of the ongoing Third Samnite War, the Senate was unable to send an embassy to Asclepius’ sanctuary at Epidaurus until 291. The experience of this embassy in Greece and its triumphant return home, bearing the god in the guise of a snake, was memorialized by numerous ancient writers.<sup>157</sup> Once established in Rome, Asclepius was worshipped both in a sanctuary on the Tiber island, which infamously became a spot to

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<sup>154</sup> Livy 7.3.4: “repetitum ex seniorum memoria dicitur pestilentiam quondam clavo ab dictatore fixo sedatam. Ea religione adductus senatus dictatorem clavi figendi causa dici iussit; dictus L. Manlius Imperiosus L. Pinarium magistrum equitum dixit.”

<sup>155</sup> Livy 10.47.

<sup>156</sup> Livy 10.47.6: “Multis rebus laetus annus uix ad solacium unius mali, pestilentiae urentis simul urbem atque agros, suffecit.”

<sup>157</sup> Livy, *Per.* 11, Ovid, *Metamorphoses* 15.644-745 and *Fasti* 1.290-294, Strabo 12.567e, Valerius Maximus 1.8.2, Pliny, *HN* 29.16 and 29.72, Arnobius 7.44, Augustine, *DCD* 3.12a and 10.16g, Orosius 3.22.5.

abandon sick slaves by the reign of Claudius, and in various cult sites throughout the city.<sup>158</sup>

Livy's Books 11–20, which cover the years 292–219, are lost. The *Periochae* and other sources record an epidemic in 249, which resulted in the declaration of *ludi saeculares*.<sup>159</sup> Augustine and Orosius refer to another pestilence in this period, probably in 266, in response to which shrines were restored at the order of the *decemviri*.<sup>160</sup> After Livy's narrative resumes in 219, no epidemics are recorded in Rome until 208, in the middle of the Second Punic War.<sup>161</sup> In that year, both Rome and its hinterland were struck by a serious but usually not fatal disease that threatened agricultural output.<sup>162</sup> In response, the Senate ordered the citizens to perform prayers at shrines around the city and the celebration of games.<sup>163</sup> Despite the religious treatment of the epidemic, it was not officially declared to be a prodigy and so was not referred to the *decemviri*.

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<sup>158</sup> Renberg 2006; on the abandonment of sick slaves, see Suetonius, *Claudius* 25.2 and Major 1994.

<sup>159</sup> Livy, *Per.* 49; see also Censorinus *DN* 17.8, Festus 441.3, and Schol. ad Hor. CS 8.

<sup>160</sup> Augustine, *DCD* 3.17, Orosius 4.5.7.

<sup>161</sup> Livy does describe in detail an interesting epidemic that struck Roman and Carthaginian troops in Syracuse at 25.26, but mentions no religious action taken, presumably because of the distance from Rome.

<sup>162</sup> Livy 27.23.5-7.

<sup>163</sup> Livy 27.23: "eius pestilentiae causa et supplicatum per compita tota urbe est et P. Licinius Uarus praetor urbanus legem ferre ad populum iussus ut ii ludi in perpetuum in statam diem uouerentur."

No epidemic, prodigy or otherwise, is then reported until the 180s, when three occurred. That of 187 was treated as a prodigy and referred to the *decemviri*.<sup>164</sup> The religious expiation consisted of a three-day *intercessio* and special sacrifices. Two more experimental expiations follow this relatively simple one. In response to the epidemic of 181, the prescribed expiations (again *intercessionones*) for the first time extended to all of Italy.<sup>165</sup> The epidemic of 180 was also expiated by means of an *intercessio*, with the addition of gilded statues dedicated to the three state deities associated with health: Apollo, Asclepius, and Salus.<sup>166</sup>

The epidemic of 142 is recorded only very briefly in Obsequens 22 and Orosius 5.4.8, as Livy's surviving text breaks off in the year 167. This is unfortunate as the circumstances of the epidemic and its expiation are intriguing. After some prodigies, including possibly a separate pestilence (as in Obsequens), a hermaphrodite was thrown into the sea. Obsequens says this happened at Luna, while according to Orosius the prodigy and expiation took place at Rome.<sup>167</sup> Immediately following this act of attempted expiation, "there was such an epidemic that everywhere bodies were thrown into public places, which could not be buried."<sup>168</sup> Orosius used this episode as evidence for his argument against the

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<sup>164</sup> Livy 38.44.

<sup>165</sup> Livy 40.19.

<sup>166</sup> Livy 40.37.1-3. See also Marwood 1988, 13, which takes this as proof that Salus was undoubtedly a state goddess of health by 180, and no longer only personified the broader concept of 'safety.'

<sup>167</sup> Luna was a Roman colony founded in 177. It is entirely possible that the prodigy and expiation both took place in Luna, with the interpretation taking place at Rome.

<sup>168</sup> Obsequens 22: "Tanta fuit Lunensibus pestilentia ut iacentibus in publicum passim cadaveribus, qui funerarent defuerint."

effectiveness of pagan religion, claiming that when the execution of the hermaphrodite failed to bring an end to the epidemic, the Roman people realized that expiations in general were useless.<sup>169</sup> Orosius was clearly writing from a Christian perspective, and he was incorrect in stating that the Romans ceased to interpret prodigies and prescribe expiations after 142. He did however capture one facet of the traditional senatorial approach to epidemic disease: official state action was not taken until the situation became quite serious. Because any epidemic was likely to become self-limiting by this point, this delayed action would have benefitted from a *post hoc ergo hoc* understanding of causation.

### III. Epidemics in the Principate

Strikingly few epidemics are recorded around the time of the fall of the Republic and the rise of the Principate, especially when compared with the number recorded during the middle Republic. One factor behind this is the cessation of production of senatorial prodigy lists altogether. This cessation has been explained in terms of a change in religious or religio-political thought, and therefore not representative of any change in the status quo of disease at Rome.<sup>170</sup> J.A. North, in a 1986 review article on recent scholarship on the

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<sup>169</sup> Orosius 5.4.10-11: "Expiatio illa crudelis et uiam mortibus hominum morte hominis struens tandem Romanis inter miseras suas erubescens, quam misera et uana esset, innotuit. ante enim in suffragium praeueniendae cladis est habita, et sic pestilentia consecuta est; quae tamen sine ullis sacrificiorum satisfactionibus tantummodo secundum mensuram arcani iudicii expleta correptione sedata est. quam si artifices illi circumuentionum haruspices sub ipsa ut adsolent declinatione morborum forte celebrassent, procul dubio sibi dis et ritibus suis reductae sanitatis gloriam uindicassent. ita misera et ad sacrilegia male religiosa ciuitas mendacis, quibus liberari non poterat, ludebatur."

<sup>170</sup> Drews 1988 and North 1986.

intersection of religion and politics in the republic, summed up the decline of evidence for senatorial responses to prodigies in the historical sources as follows:

In my view the disappearance of prodigy-lists from historians cannot be taken just as an accident of recording practice, but as recognition of the declining importance of a traditional mode of dealing, accompanied by the transfer of the conception into a new mode, eventually supportive of the new regime and the new ideas.<sup>171</sup>

In other words, while later Roman writers may indeed have had less interest in prodigy lists than did Livy due to changes in the standards of the genre of history, the disappearance of such lists from historical texts may also reflect an actual decline in their generation. The “traditional mode of dealing” that North refers to was part of a specifically Republican approach to religion:

Where other societies have prophets, diviners or holy men, republican Rome characteristically had rather large committees of priests bound by rules and keeping minutes... [Senatorial prodigy procedure] provided a way of coping with threats of danger, which involved many individual ritual roles; this avoided the risk of concentrating power on any one man, either in the role of expert practitioner or of beneficiary of the word from the gods.<sup>172</sup>

More recently, Richard Paine and Glenn Storey have used a comparison of prodigy annals and paleodemographic data from Iron Age transalpine Europe to argue that the end of the annalistic epidemic reports can be better understood as the result of a new attitude toward disease. The increasing mobility of people and pathogens made possible by empire, according to Paine and Storey, would have made pestilences so common that they were no longer considered worth recording. Another consequence of more frequent epidemics

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<sup>171</sup> North 1986, 256.

<sup>172</sup> North 1986, 257.

would be a changed mortality profile, which also would contribute to the decreased visibility of epidemics in the historical record.

What may have happened is that with the shortening of epidemic intervals, children bore the brunt of mortality... [and] the constant background continuum of infant and children high mortality disease loads was not noticed as anything particularly significant.<sup>173</sup>

Grmek would have understood such a change to represent the start of a new pathocenosis, although Paine and Storey do not mention the term. According to their interpretation, the periodic exogenous epidemics that had caused high mortality among humans of all ages as well as animals would have given way, during the late Republic, to “an era of disease endemicity” marked by higher mortality among children as well, presumably, as immigrants who lacked acquired immunity to the local disease pool.<sup>174</sup> Though unsupported by positive textual or archaeological evidence, Paine and Storey’s hypothesis fits well with Sallares’ model of endemic malaria.<sup>175</sup>

Complicating the concept of a changed disease regime are four high-mortality epidemics that took place between 43 BCE and 80 CE. With a mean interval of 56 years—substantially higher than the mean interval of “between 10 and 20” years found in the Republican annals—these five epidemics do show a different epidemiological pattern, albeit one with an extremely small sample size. But should this pattern be understood to reflect biological reality or simply a changed recording practice, in which these four

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<sup>173</sup> Paine and Storey 2008, 188n.8.

<sup>174</sup> Paine and Storey 2008, 188.

<sup>175</sup> Sallares 2002.

epidemics were deemed historically relevant while many others were not? Narratives of the epidemics written by Cassius Dio, Tacitus, and Suetonius can serve as case studies for the degree to which the Roman state response to epidemic disease had changed.

The first of the four took place shortly after the assassination of Caesar in 43 BCE, when Antony and Dolabella were consuls. Following a series of ill omens, an epidemic spread across Italy.<sup>176</sup> In response to the epidemic (and not the other omens, as Dio makes clear), the Senate ordered the reconstruction of the Curia Hostilia, which had been demolished the year before to make room for the Curia Iulia.<sup>177</sup> There is no mention of a priestly college; instead, the Senate seems to have interpreted the prodigy itself. It is difficult to read this expiation as anything other than an attempt to bolster the old Republic by reconstructing a powerfully symbolic public building. Likewise, the revival of the lapsed custom of treating an epidemic as a portent stands out as a conscious political choice.

Twenty-two years later, in 22 BCE, the public reaction to the second epidemic reported by Dio Cassius likewise reflected the contemporary political situation:

The pestilence raged throughout all Italy so that no one tilled the land, and I suppose that the same was the case in foreign parts. The Romans, therefore, reduced to dire straits by the disease and by the consequent famine, believed that these woes had come upon them for no other reason than that they did not have Augustus for consul at this time also.<sup>178</sup>

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<sup>176</sup> Dio Cassius, *Roman History*, 45.17.8.

<sup>177</sup> Destruction of the Curia Hostilia: Dio Cassius, *Roman History*, 44.5.1.

<sup>178</sup> Dio Cassius, *Roman History*, 54.1.2. Dio also reports that the previous year was “unhealthy” at 53.33.4, but does not state that there was an actual defined epidemic of any sort.

Though not made explicit, this line of reasoning must depend on the concept of the *pax deorum* and reflect Augustus's perceived special relationship with the gods of state. The epidemic and famine marked the beginning of a series of anti-senatorial riots by the Roman people, who feared that Augustus' decision not to stand for consul that year was the result of a senatorial conspiracy to oust him from power.<sup>179</sup> The rioting citizens apparently still believed that epidemics could be interpreted as prodigies of a sort, but no longer accepted the Senate's exclusive authority to interpret the prodigy and bring the epidemic to an end.

The third epidemic took place in 65 CE. According to Suetonius, 30,000 people died in the span of a few months.<sup>180</sup> The pestilence is located in Suetonius' text within a list of "certain accidents of fortune" that the Roman people suffered in addition to "all the disasters and abuses" caused by Nero, setting the stage for the events leading to Nero's suicide in 68 AD. In this context, Suetonius' inclusion of the pestilence can be read as a rhetorical device: it is one piece of evidence among many that proves Nero's inadequacy as emperor, even if it was not understood as such by the Senate. Tacitus discusses the pestilence of 65 in further detail:

A year of shame and of so many evil deeds heaven also marked by storms and pestilence. Campania was devastated by a hurricane, which destroyed everywhere country houses, plantations and crops, and carried its fury to the neighborhood of Rome, where a terrible plague was sweeping away all classes of human beings without any such derangement of the atmosphere as to be visibly apparent. Yet the houses were filled with lifeless forms and the streets with funerals. Neither age nor sex was exempt from peril. Slaves and the free-born populace alike were suddenly cut off, amid the wailings of wives and children, who were often consumed on the very funeral pile of their friends by whom they had been sitting and shedding tears. Knights and senators perished indiscriminately, and yet their deaths were less

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<sup>179</sup> Dio Cassius, *Roman History*, 54.1.1-2.5.

<sup>180</sup> Suetonius *Nero* 39.1.



deplored because they seemed to forestall the emperor's cruelty by an ordinary death.<sup>181</sup>

Like Suetonius, Tacitus does not explicitly pin the blame for this epidemic on Nero, or in fact on any person or body of people, although he does make a nonspecific reference to the involvement of the gods. The epidemic is instead linked to Nero indirectly, by proximity in the text to bad actions of the emperor and by comparison: Suetonius says that it was better to die from a disease than at Nero's hands.

The fourth epidemic took place in 80 CE, during the reign of the emperor Titus. Coming so close in time to the eruption of Mt. Vesuvius and a devastating fire at Rome, the epidemic rounded out a series of events that would certainly have been interpreted as a series of dire prodigies and prescribed expiations by the Republican Senate. In his description of the epidemic, however, Suetonius makes no reference to any Senatorial action. Instead, Titus is described as a benevolent, if unsuccessful, protector of his subjects.

In these many great calamities he showed not merely the concern of an emperor, but even a father's surpassing love, now offering consolation in edicts, and now lending aid so far as his means allowed... For curing the plague and diminishing the force of the epidemic there was no aid, human or divine, which he did not employ, searching for every kind of sacrifice and all kinds of medicines.<sup>182</sup>

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<sup>181</sup> Tacitus, *Annales* 16.13: "Tot facinoribus foedum annum etiam dii tempestatibus et morbis insignivere. vastata Campania turbine ventorum, qui villas arbusta fruges passim disiecit pertulitque violentiam ad vicina urbi; in qua omne mortalium genus vis pestilentiae depopulabatur, nulla caeli intemperie quae occurreret oculis. sed domus corporibus exanimis, itinera funeribus complebantur; non sexus, non aetas periculo vacua; servitia perinde et ingenua plebes raptim extinguere, inter coniugum et liberorum lamenta, qui dum adsident, dum deflent, saepe eodem rogo cremabantur. equitum senatorumque interitus quamvis promisci minus flebiles erant, tamquam communi mortalitate saevitiam principis praevenirent."

<sup>182</sup> Suet. *Tit.* 8.3-4: "In iis tot adversis ac talibus non modo principis sollicitudinem sed et parentis affectum unicum praestitit, nunc consolando per edicta, nunc opitulando quatenus

The mention of “human or divine” aid (*divinam humanamque opem*), while it acknowledges the continued religious significance of intractable epidemics, suggests that there was no longer a programmatic state response to severe pestilence, nor any political meaning assigned to it on behalf of the state.

*a. Low-mortality epidemics*

The four epidemics mentioned above seem to have been preserved in the mainstream historical record because they were responsible for remarkable numbers of deaths in politically important regions of the empire. They are, however, hardly the only epidemic diseases known to have occurred during the period. Though he wrote under the Flavian emperors, Pliny the Elder is a valuable source for changes in the disease ecology at Rome earlier in the first century CE. At the beginning of Book 26 of his *Natural History*, Pliny discusses several new diseases “unknown in past years not only to Italy but also to almost the whole of Europe.”<sup>183</sup>

Two of these diseases, carbuncle and leprosy, had disappeared from Italy by the fall of the Republic; still, Pliny connects both to the growth of the empire.<sup>184</sup> The other two, lichen (or mentagra) and colum, both reached Rome during the reign of Tiberius, a period

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suppeteret facultas...Medendae valitudini leniendisque morbis nullam divinam humanamque opem non adhibuit inquisito omni sacrificiorum remediorumque genere.”

<sup>183</sup> Pliny the Elder, *NH* 26.1.1: “...novos omnique aevo priore incognitos non Italiae modo verum etiam universae prope Europae morbos...”

<sup>184</sup> Carbuncle came to Rome from Galla Narbonensis in 164 BCE (Pliny, *NH* 26.4.5). Leprosy arrived from Egypt during the lifetime of Pompey (26.5.7). On leprosy’s absence from Italy, cf. Celsus, *De Medicina* 3.25.1-2.

during which no mention of epidemic disease in the capital is found in other histories. Similarly unusual in discussions of Roman epidemics is that Pliny here identifies individual diseases by name—something unsurprising in the context of Pliny’s medical writing and the encyclopedic *Natural History* more generally, but strikingly different from the Livy and the other historical sources, which as a rule never give specific names to different types of epidemic disease but instead use generic words like *pestilentia*.

According to Pliny, the disease he calls lichen originated in Asia Minor and was brought back to Rome by a member of the provincial administration.<sup>185</sup> Once the disease reached Rome, it did not ravage the population indiscriminately: rather, it followed a distinctive epidemiological pattern based on social behavior:

Women were not liable to the disease, or slaves and the lower and middle classes, but the nobles were very much infected through the momentary contact of a kiss.<sup>186</sup>

While not fatal, lichen was disfiguring and poorly understood by the mainstream Greek physicians at Rome, who attempted to burn the lesions off, causing pain and further disfigurement. As a result, specialist physicians from Egypt, the “parent of such [i.e. skin] diseases” (*genetrice talium vitiorum*), migrated to Rome to take advantage of the huge sums of money infected men of the elite were willing to spend for a cure. One such patient, Manilius Cornutus, a legate of Aquitania, is reported to have spent 200,000 sesterces total on treatments for lichen.<sup>187</sup>

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<sup>185</sup> Pliny the Elder, *NH* 26.3.3.

<sup>186</sup> Pliny the Elder, *NH* 26.3.3: “Nec sensere id malum feminae aut servitia plebesque humilis aut media, sed proceres verloci transitu osculi maxime.”

<sup>187</sup> Pliny the Elder, *NH* 26.3.4.

The emperor himself was allegedly the first victim of *colum* according to Pliny, an extraordinary occurrence in Roman history if true. Describing the fear of the Roman public upon learning that Tiberius was suffering a foreign and previously unknown ailment, Pliny writes:

What are we to say this means, what wrath of the gods? Were the recognized kinds of human disease, more than three hundred, too few, that they must be increased by new ones also to add to man's fears?<sup>188</sup>

Unlike leprosy, which had died out quickly in Italy (*hic quidem morbus celeriter in Italia restinctus est*), Pliny tells us that *colum* became endemic after its high-profile first appearance: "This itself is a wonderful fact, that some diseases should disappear from among us while others remain."<sup>189</sup> This lucid distinction between endemic and epidemic disease is part of a broader recognition found in Pliny of the ability of diseases to travel with people, and of different patterns of transmission. In his discussion of lichen, which, as mentioned above, only struck a small portion of the population, Pliny says:

On the other hand, it has more usually happened that new kinds of disease on their first appearance have been epidemic [lit: been suffered by crowds]. What can be found more marvelous than this, that some diseases should arise suddenly in a special part of the world, should attack special limbs of human beings or special ages, or even people of a special position in life, just as if a plague chose its victims, one children, another adults, one making the nobility especially liable, another the poor.<sup>190</sup>

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<sup>188</sup> Pliny the Elder, *NH* 26.6.9: "Quid hoc esse dicamus aut quas deorum iras? Parum enim erant homini certa morborum genera, cum supra trecenta essent, nisi etiam nova timerentur?"

<sup>189</sup> Pliny the Elder, *NH* 26.6.9: "Id ipsum mirabile, alios desinere in nobis, alios durare, sicut *colum*."

<sup>190</sup> Pliny the Elder, *NH* 26.3.4: "Acciditque contra saepius ut nova genera morborum gregatim sentirentur. Quo mirabilius quid potest reperiri? Aliqua gigni repente vitia

All of the new diseases mentioned in this passage share crucial characteristics. First, they originated outside of Italy, in the provinces, and their transmission to Rome was facilitated by the infrastructure of the empire. Second, they were all highly visible diseases, whether literally (because they disfigured their victims) or because they infected the rich and powerful. In the case of lichen in particular, Pliny lucidly describes person-to-person transmission of a disease. He wonders at it because the epidemiological process of a disease transmitted through skin (or body fluid) contact does not fit within any major contemporary school of thought regarding disease causation, nor does it resemble historic plagues like those described by Livy, which Pliny understands to have infected and killed indiscriminately.<sup>191</sup>

#### **IV. Roman state responses to epidemics during the ‘Age of Pandemic Disease’**

The process of redefining the relationship between the Roman state and epidemic disease over the first century and a half of the Roman Empire may indeed have been reinforced by a relative paucity of high-mortality epidemics during that period. When the so-called Antonine Plague spread across the Mediterranean starting in 165 CE, however, a new biological reality took hold. The initial appearance of the plague was followed by periodic outbreaks of the same disease that continued until the Severan dynasty, starting a

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*terrarum in parte certa membrisque hominum certis vel aetatibus aut etiam fortunis, tamquam malo eligente, haec in pueris grassari, illa in adultis, haec proceres sentire, illa pauperes?”*

<sup>191</sup> Pliny likely also had in mind the pestilence of 65 CE (discussed above), which he may have witnessed personally.

centuries-long pattern of waves of epidemic and endemic disease that Kyle Harper has recently characterized late antiquity as “the age of pandemic disease.”<sup>192</sup>

*a. The Antonine Plague*

The Antonine Plague—also referred to as the Galenic Plague due to the physician Galen’s description of its symptoms—has long posed a historiographical conundrum. As Gilliam noted in 1961, one camp of modern historians of Rome, which included Niebuhr, Otto Seeck, and H.M.D. Parker, believed that the mortality caused by the plague was so enormous that it contributed materially to the fall of the Roman Empire. Other historians, including Gibbon and Rostovtzeff, thought that the plague had minimal if any historical importance.<sup>193</sup> Gilliam thus undertook a survey of literary, epigraphical, papyrological, and numismatic sources, noting that:

The most important question to be kept in mind is that of the dimensions of the plague: whether we should think of it as an earlier Black Death, destroying a fifth or even half of the Empire’s population, or as a major epidemic of uncertain but probably much more limited impact, more nearly comparable to its many predecessors in the ancient world.<sup>194</sup>

Contemporary literary sources carried the most weight for Gilliam, particularly the writings of Galen, Dio Cassius’s eyewitness description of a pestilence of 189 CE, usually

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<sup>192</sup> Harper 2015, 223.

<sup>193</sup> Gilliam 1961, 225-6. More recently, Bruun 2008.

<sup>194</sup> Gilliam 1961, 227. In compiling his list of sources, Gilliam relied heavily on J. Schwendemann’s 1923 commentary on the *Vita Marci* of the *Historia Augusta*, J. F. K. Hecker’s 1835 *De peste Antoniniana commentatio*, and K. Buresch’s 1889 edition of the inscriptions of Claros, among others.

taken to be a recurrence of the Antonine Plague, is also treated as significant.<sup>195</sup> The other literary sources, including the discussion of the origins of the plague in the *Historia Augusta*,<sup>196</sup> date much later than the plague itself. The relative paucity of eyewitness accounts and the separation in time between the epidemic and the “most striking, sweeping statements about the plague” led Gilliam to “suspect that the fame of the plague is owing in part to accident and, even more, to exaggeration.”<sup>197</sup> He continues,

[I]t is quite clear that there was a great and destructive epidemic under Marcus Aurelius. It seems probable, though by no means certain, that it caused more deaths than any other epidemic during the Empire before the middle of the third century. On the other hand, infectious diseases were undoubtedly a very important factor in the high death rate of the ancient world in all periods... Until much more substantial evidence is presented, there seems insufficient reason for concluding that the plague was really comparable to the Black Death in its severity and its demographic effects and was a major turning point in Roman history.<sup>198</sup>

Seeking such “much more substantial evidence,” historians have in recent decades given more weight to non-literary evidence that could be used to create a quantitative picture of the plague’s impact. Duncan-Jones’ 1996 study argues more forcefully than Gilliam’s in favor of the use of papyrological and archaeological findings as proxies for the impact of the Antonine Plague on the demography and economy of the Roman Empire. Downward trends

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<sup>195</sup> Dio Cassius, 74.14.4: “Γέγονε δὲ καὶ νόσος μεγίστη ὣν ἐγὼ οἶδα· δισχίλιοι γοῦν πολλάκις ἡμέρας μιᾶς ἐν τῇ Ῥώμῃ ἐτελεύτησαν.”

<sup>196</sup> SHA *Vita Veri* 8.1 concerns the origin of the plague as a punishment from Apollo, also described in Ammianus Marcellinus, *Hist.* 23.6. The *Vita Marci* 13.3-6 describes corpses taken away with special vehicles, special measures taken concerning burials and tombs, which Duncan-Jones notes reflects a “general belief in contagion, irrational as it may have seemed to doctors”

<sup>197</sup> Gilliam 1961, 248.

<sup>198</sup> Gilliam 1961, 249-50.

found in data sources as diverse as Phrygian quarry outputs and the number of farm leases in Egypt around the time of the plague, Duncan-Jones argues, show that “the historians’ indications of a major widespread catastrophe are largely correct.”<sup>199</sup>

In the two decades since its publication, Duncan-Jones’ study has inspired a great deal of innovative but controversial research. Walter Scheidel has embraced the idea of using quantitative proxies to fill in the gaps left by the literary record, and has introduced demographic and epidemiological models that complement Duncan-Jones’.<sup>200</sup> Roger Bagnall takes issue with Scheidel’s lack of acknowledgement of sources, such as papyrological evidence for demographic changes in Egypt predating the arrival of the plague, that could complicate the clean models he favors.<sup>201</sup> Bagnall’s objection is primarily one of methodology. He does not argue that the Antonine Plague was not catastrophic but, along the lines of Gilliam’s verdict regarding the literary sources, Bagnall finds that proxy data is not persuasive enough evidence for the demographic significance of the epidemic.

Although opinions on the validity of proxy data vary, historians do generally accept that the Antonine Plague was characterized by high mortality and geographical reach. Theories explaining the apparent lack of an official response on the scale of those reported during the Republic, however, have not correspondingly grown more plentiful.<sup>202</sup> There is little evidence of any official response to any outbreaks of this plague on the part of the

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<sup>199</sup> Scheidel 2002 and 2008; Duncan-Jones 1996, 136.

<sup>200</sup> Scheidel 2012.

<sup>201</sup> Bagnall 2002.

<sup>202</sup> Gourevitch 2013, 65 notes the lack of state action in accounts of the plague but does not offer a theory as to the reason for it.



public, whether religious or not. This is not to say that emperors are never mentioned in connection with the plague in contemporary or later sources. Galen, the best source for the symptomology of the disease, was in fact in the employ of the emperors Marcus Aurelius and Lucius Verus when the plague reached Italy, but he describes no imperial policy or relief program resulting from or related to the epidemic. The *Vita Marci* from the *Historia Augusta* does describe certain practical and charitable measures taken by the two emperors.

And there was such a pestilence, besides, that the dead were removed in carts and waggons. About this time, also, the two emperors ratified certain very stringent laws on burial and tombs, in which they even forbade any one to build a tomb at his country-place, a law still in force. Thousands were carried off by the pestilence, including many nobles, for the most prominent of whom Antoninus erected statues. Such, too, was his kindness of heart that he had funeral ceremonies performed for the lower classes even at the public expense...<sup>203</sup>

Although there is no mention of the plague in the law itself, Birley connects this passage with a law in the Digest regarding the portage of corpses through residential areas.<sup>204</sup> The latter part of the passage, in which Marcus Aurelius engages in a performative display of grief, echoes the description of Titus's response to the plague of 90, but is a response to the devastation of the plague rather than an attempt to end it or even to ameliorate the physical suffering of its victims.

Evidence for institutional intervention of a supplicatory religious nature is even weaker. The *Historia Augusta's Vita Marci* notes that, when the plague failed to abate even after the death of Verus in 169, Marcus as sole emperor "both zealously revived the

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<sup>203</sup> SHA *Vita Marci*, 13.

<sup>204</sup> Birley 1966.

worship of the gods and trained slaves for military service.”<sup>205</sup> Exactly what this revival of the worship of the gods entailed, however is unclear. Eusebius describes a number of martyrdoms between 161 and 168 CE, which Paul Keresztes understood to be “the result of an Imperial edict of about 167 A.D. ordering sacrifices to the gods for the whole of the Empire to win their help in the tragic situation caused by the devastating plague and possibly by the threat of the German war.”<sup>206</sup> Because Marcus’ *Historia Augusta* biographer only mentions specific rituals in connection with the Marcomannic War, Keresztes concludes that,

the historian was wrong, in his earliest reference to the extensive religious ceremonies, when he ascribed them only to the war. They were prompted mainly, if not entirely, by the plague, which must have reached its peak at about the time of the outbreak of open war, and their date should certainly be between 166 and 168 A.D.<sup>207</sup>

Appealing as it might be to associate a propitiatory ritual with the Antonine Plague, Keresztes’ conclusion is conjectural and privileges narratives of Christian persecution written by significantly later writers like Eusebius and Orosius over writing by Christians alive during the second century. Among these are Melito, who never describes an imperial edict of the sort even in his correspondence with Marcus Aurelius, and Tertullian, who actually praised the emperor’s protection of Christians.

Non-literary evidence for an official state religious response is similarly ambiguous. Gilliam and Duncan-Jones both note that the group of *Salus* coin-types minted between 168

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<sup>205</sup> HA *Vita Marci* 21.6.

<sup>206</sup> Keresztes 1968, 340.

<sup>207</sup> Keresztes 1968, 330.

and 171 CE could have a connection to the arrival of the plague at Aquileia, where it threatened the emperors, but any the small number of these issues and the fact that a Salus type had also been minted by the emperors before the outbreak of the plague preclude any secure conclusion.<sup>208</sup>

Dedicatory inscriptions to Apollo Clarios found across the Mediterranean have been interpreted by some scholars as evidence for an imperial decree, and by Christopher Jones as a true centralized religious response to the Antonine Plague.<sup>209</sup> Again, hard evidence is elusive. Jones' case for interpreting these ten inscriptions as an expression of an imperial decree rests largely on the fact that one was dedicated by a military unit, the *cohors I Tungrorum in Vercovicium*.<sup>210</sup> None of the inscriptions, however, mention a pestilence or the emperor, but simply note that the inscriptions were dedicated "*secundum interpretationem oraculi Clari Apollinaris*." Furthermore, none of the inscriptions can be dated precisely enough to place them within the years of the Plague. In fact, Eric Birley, who first put forth the argument that "[n]o person less eminent than the emperor himself could have been responsible" for the near-identical wording of the inscriptions, dated them to the reign of Caracalla.<sup>211</sup>

Several preserved oracular responses attributed to the same Apollo Clarios in the East are more firmly connected to the Antonine Plague. These, however, seem to have been organized on a municipal, regional, or even ethnic level rather than at the direction of the

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<sup>208</sup> Gilliam 1961, 243-4; Duncan-Jones 1996, 130; Galen, K. 19.17-18.

<sup>209</sup> Jones 2005, Bruun 2008, 132-8, and Gilliam 1961, 234.

<sup>210</sup> ILS 3230 = CIL VII 633.

<sup>211</sup> Birley 1974.

Roman imperial administration.<sup>212</sup> The surviving oracular responses do prescribe expiations, but they all show a local or regional character and focus. None mention the emperor, the Empire, or the state gods of the Romans. Despite Birley's assertion that only the emperor would have been able to direct enough attention toward Apollo Clarios to account for the ten dedicatory inscriptions, the content of the oracular responses suggests that individual cities and groups sought out the wisdom and protection of the god on their own initiative.

*b. The Plague of Cyprian and the "Persecution of Decius"*

Almost a century after the initial outbreak of the Antonine Plague, the so-called Plague of Cyprian provoked a different kind of response that reflected a further change in the religious-political interpretation of plagues in the Roman world. The plague is named after the bishop Cyprian of Carthage, an eyewitness who vividly described the epidemic's symptoms, which differ significantly from those reported for the Antonine Plague.<sup>213</sup>

As the strength of the body is dissolved, the bowels dissipate in a flow; a fire that begins in the inmost depths burns up into wounds in the throat; that the intestines are shaken with continuous vomiting; that the eyes are set on fire from the force of the blood; that the infection of the deadly putrefaction cuts off the feet or the

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<sup>212</sup> Parke 1985, Graf 1992, Gourevitch 2013, 90. Hierapolis, Caesarea Trocetta, Sardis, and Ephesus all sought guidance from the oracle of Apollo on Claros. See, however, Gilliam 1961, 234n42, where he notes that not all scholars have been convinced that the Trocetta and Pergamum inscriptions have a direct connection to the Antonine Plague.

<sup>212</sup> ILS 3230 = CIL VII 633.

<sup>213</sup> As Harper 2015 notes, however, this plague is exceptionally well-documented, with nearly two dozen surviving textual sources, six of which are independent eyewitness testimonies (Dionysius of Alexandria, Cyprian of Carthage, Pontius of Carthage, the 13th Sibylline oracle, and the Athenian historians Dexippus and Philostratus). More recently, Harper has identified a seventh eyewitness source, the pseudo-Cyprianic *De laude martyrii*.

extremities of some; and that as weakness prevails through the failures and losses of the bodies, the gait is crippled or the hearing is blocked or the vision is blinded.<sup>214</sup>

Evidence for the epidemic's mortality can be found in the account of another eyewitness, Dionysius of Alexandria.

This immense city no longer contains as big a number of inhabitants, from infant children to those of extreme age, as it used to support of those described as hale old men. As for those from 40 to 70, they were then so much more numerous that their total is not reached now, though we have counted and registered as entitled to the public food ration all from 14 to 80; and those who look the youngest are now reckoned as equal in age to the oldest men of our earlier generation.

As Harper notes, this type of demographic change, if Dionysius's account is to be believed, could represent up to a 62% drop in the total population of Alexandria during the years of the plague.<sup>215</sup>

Dionysius's letters date the arrival of the plague in Egypt to 249 CE.<sup>216</sup> Later in that year or early in 250, the emperor Decius issued an edict directed at the empire's growing Christian population. The text of the edict itself has not survived, so historians have had to rely on two classes of evidence to determine its contents. The first class consists of references to the edict by Christian writers including Cyprian and Dionysius (by way of

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<sup>214</sup> Cyprian, *De mortalitate*. Harper 2015 presents a compelling case for the identification of the disease as a hemorrhagic fever.

<sup>215</sup> Harper 2015.

<sup>216</sup> As discussed below, the 5<sup>th</sup>-century writer Orosius dated it two years later, likely in order to fit it into his narrative of plague as divine punishment for persecutions of Christians.

Eusebius), while the second consists of a number of Egyptian papyrus documents certifying sacrifices performed in accordance with the decree.<sup>217</sup>

While the Christian sources give the impression that the decree was intended specifically as an anti-Christian measure, Rives argued against this interpretation in 1999, citing “A number of scholars [who] now prefer instead to emphasize its positive goal of ensuring that everyone in the Empire, Christians included, perform a full and traditional sacrifice.” The impetus for the edict would have been a desire to unify the empire by correcting a perceived neglect of the state gods that increased the risk of empire-wide disasters, and “although [Decius] may have considered Christianity a major cause of this neglect, it need not have been the only one.”<sup>218</sup> In recent papers, Kyle Harper has argued that the Decian edict must be considered in the context of the Cyprianic Plague.<sup>219</sup>

It seems that most scholars are convinced that the order of Decius to sacrifice was not conceived as an anti-Christian measure nor particularly aimed at Christians. In short, it was not a persecution... It was still, however, novel, in its scope and enforcement, which went well beyond conventional offers of sacrifice upon imperial accession. In short, the phenomenon remains, but what was long considered the cause has been removed, and we still need an explanation for why Decius and his successors sought to enforce a universal sacrifice.<sup>220</sup>

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<sup>217</sup> A letter of Cyprian to Cornelius dated to 252 CE refers to “the sacrifices which the people have been ordered to observe by the edict which has been posted.” Those who did perform the sacrifices presumably would have received the papyrus receipts that form the other body of evidence. Rives 1999 counted 44 such papyrus certificates in 1999.

<sup>218</sup> Rives 1999, 151.

<sup>219</sup> Harper 2015 and 2016.

<sup>220</sup> Harper 2016.

For Harper, the devastation of the epidemic was a major causal factor for this experimentation on the part of the administration of the Roman Empire's official religion. An edict prescribing universal, orthodox sacrifice to the gods was indeed a novel thing for an emperor to issue. The only comparable action taken by emperors during the Imperial-period epidemics described above would be that of Marcus Aurelius, for which evidence is thin. Decius's edict is, however, strikingly similar to the senatorial action of 428 BC, in which "the aediles were instructed to ensure that only Roman gods were worshipped, and only in the established way" after Roman citizens turned to foreign *superstitiones* during an epidemic.<sup>221</sup>

The religious significance of Cyprianic Plague did not end with the epidemic itself. A century and a half after the epidemic, Orosius included it in his seven-book *Historiae Adversus Paganos*. Written in the early 5<sup>th</sup> century, this text is an apology aimed at pagan elites following Porphyry of Gaza who blamed Christians for a perceived increased frequency of epidemics, invasions, and other disasters over the past several centuries. A follower of Augustine of Hippo, who touched on the matter in the third book of his *De Civitate Dei*, Orosius argued that disasters had always been a common feature throughout human history, and that in fact they had become less severe since the birth of Christ because the existence of Christians tempered God's wrath.

As for the major disasters that *had* struck the Roman Empire since the invention of Christianity in the first century CE, Orosius argued that each had been orchestrated by the

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<sup>221</sup> Livy 4.30.9-11.

Christian god as revenge for specific official persecutions of Christians.<sup>222</sup> The first vengeance (*ultio*) is identified as the plague of 65, a result of the first persecution of Christians under Nero.<sup>223</sup> Orosius goes on to identify two further epidemics as *ultiones*: the Antonine Plague and the Cyprianic Plague. Remarkably, Orosius gives incorrect dates for both of these. He claims that the Antonine Plague started after the death of Lucius Verus in 169.<sup>224</sup> Similarly, Orosius dates the onset of the Plague of Cyprian to 451, about a year after the date given by sources contemporary to the plague.<sup>225</sup>

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<sup>222</sup> Orosius, *Historiae Adversos Paganos* 7.26.9: “decem persecutiones a Nerone usque ad Maximianum Ecclesia Christi passa est: nouem, ut ego dixi, ultiones, ut ipsi non negant, calamitates e uestigiis consecutae sunt.”

<sup>223</sup> Orosius *HAP* 7.7.10-11: “auxit hanc molem facinorum eius temeritas impietatis in Deum. nam primus Romae Christianos suppliciiis et mortibus affecit ac per omnes prouincias pari persecutione excruciarum imperauit ipsumque nomen exstirpare conatus beatissimos Christi apostolos Petrum cruce, Paulum gladio occidit. mox aceruatim miseram ciuitatem abortae undique oppressere clades. nam subsequente autumno tanta urbi pestilentia incubuit, ut triginta milia funerum in rationem Libitinae uenirent...”

<sup>224</sup> Orosius *HAP* 7.15.4-5: “Eo defuncto Marcus Antoninus solus reipublicae praefuit. sed in diebus Parthici belli persecutiones Christianorum quarta iam post Neronem uice in Asia et in Gallia graues praecepto eius exstiterunt multique sanctorum martyrio coronati sunt. secuta est lues plurimis infusa prouinciis, totamque Italiam pestilentia tanta uastauit, ut passim uillae, agri atque oppida sine cultore atque habitatore deserta in ruinas siluasque concesserint.”

<sup>225</sup> Orosius *HAP* 7.22.1-2: “Anno ab urbe condita millesimo decimo duo imperatores uicensimo septimo post Augustum loco creati sunt: Valerianus in Raetia ab exercitu Augustus appellatus, Romae autem a senatu Gallienus Caesar creatus; mansitque Gallienus in regno infeliciter annis XV, respirante paulisper ab illa supra solitum iugi et graui pestilentia genere humano. prouocat poenam suam obliuiosa malitia. impietas enim flagella quidem excruciatum sentit, sed a quo flagellatur, obduratum non sentit. ut de superioribus taceam, facta a Decio Christianorum persecutione totum Romanum imperium pestilentia magna uexauit. mentita est iniquitas sibi, prauo in perniciem suam circumuenta iudicio, pestilentiam communis casus esse accidentemque ex morbis mortem naturae finem esse non poenam.”



In both cases, the misdating of the epidemics seems to be an attempt to establish a direct causal tie to a recorded persecution of Christians.<sup>226</sup> For the Plague of Cyprian, the persecution in question is the Persecution of Decius. As noted above, in reality the Decian Persecution seems to have been an official imperial response to the plague that at least in part was provoked by the Christians' own reactions to it. Orosius's inversion of the chronology of the two events reflects a phenomenon of the 5<sup>th</sup> century noted by Dionysios Stathakopoulos, who argues that at this point Christians "easily and rapidly adopted the discourse that had been directed against them in the early stages of the consolidation of their religion, as any catastrophes that befell the Roman Empire had been ascribed to the presence of the Christians."<sup>227</sup>

#### **V. A "classic plague narrative"?**

Hoping to establish a baseline against which to compare evidence for the Antonine Plague, Duncan-Jones turned to Livy and other annalistic sources in order to piece together a "classic plague narrative."<sup>228</sup> He identified ten "recurrent features" found in descriptions of Roman epidemics, which follow in abridged form.

1. Military recruitment crises
2. Animal mortality preceding human mortality
3. Set number of days in which victims of the plague will die
4. Social differences in morbidity/mortality

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<sup>226</sup> According to Orosius as well as his contemporary Sulpicius Severus (*Chron.* II.32), Decius' edict was the seventh persecution against the Christians.

<sup>227</sup> Stathakopoulos 2004, 76. Stathakopoulos argues that the *Codex Theodosianus* marks the full realization of this belief in Christianity.

<sup>228</sup> Duncan-Jones 1996, 112.

5. Burial crises resulting from too many corpses
6. Lack of carrion beasts (vultures or dogs)
7. Religious measures taken
8. Southern or eastern origins of the plague identified
9. Plague described as the worst ever
10. Plague blamed on human agents (e.g. poisonings) when no medical cause found

Features numbers 7 and 8 are worth some critical thought. Number 8, the location of a plague's origins in the south or east of the known world, is not, as Duncan-Jones notes, found in Livy or indeed in any source discussing Rome until the very late Republic.<sup>229</sup> The attribution of the origins of epidemics to regions to the south and east of Rome is better understood not as a constant feature of Roman conceptions of disease, but rather as a specific historical phenomenon tied to ideas of empire.<sup>230</sup>

Feature number 7, religious response, similarly requires historical (and historiographical) context. Because our sources for Republican-era epidemics are overwhelmingly annalistic in nature, identifying a religious component to their reportage borders on the tautological. As will be discussed in greater detail below, the cessation of annalistic record-keeping in the late first century BCE had enormous, if still poorly-understood, consequences regarding the evidence for subsequent epidemics. Because the majority of the epidemics mentioned by Livy are done so precisely because of their

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<sup>229</sup> The Republican-era plagues mentioned by Duncan-Jones at 114n63 all took place in Carthage. Pliny the Elder writes that leprosy came to Rome from Egypt during the time of Pompey the Great (*NH* 26.5.7). He identifies the origin of the only older exogenous, named disease mentioned, carbuncle, as Gallia Narbonensis, which is located neither to the south nor the east but to the northwest of Rome (*NH* 26.4.5).

<sup>230</sup> See especially Flemming 2010, which discusses book 26 of Pliny's *Natural History* in the context of late first century CE perspectives on empire.

religious significance, it may well be the case that some Republican epidemics have been lost to history because they were not interpreted as prodigies. Therefore, we must be wary of concluding from the annalistic evidence that a religious response was ever a universal feature of Roman epidemics, even during the Republic.

Still, the prominent place of pestilence in the annalistic tradition makes it clear that religious response was a crucial aspect of the way in which the republican Senate understood its own agency and responsibility with regards to epidemic disease. The Senate did not, however, have a one-size-fits-all response to even those pestilences that were treated as religiously significant. Treatment, including which religious authorities were consulted and which expiations recommended, varied significantly from one epidemic to the next. Epidemics seem to have been, in fact, the cause of many of the most important ritual innovations in republican religious history. Notable examples include the invention of the *lectisternium* in 399 and the formal state recognition of the Greek healing deities Apollo Medicus and Asclepius.

Much of the religious experimentation seen in official responses to epidemic disease can be directly tied to unusually long-lasting epidemics. The reason for this willingness to experiment is perhaps best illustrated in the case of the epidemic of 428, when the Senate took action to reign in a popular religious movement. The *peregrina atque insolita piacula* in themselves were unlikely to have been the Senate's primary concern, since only five years earlier it had commissioned the construction of a temple for Apollo Medicus in response to another epidemic. Rather, the problem was likely to have been the fact that the

new rituals were not officially sanctioned.<sup>231</sup> In subsequent cases of extended epidemics, most notably those of 365-363 and 295-293, the Senate was proactive when their first-line religious prescriptions failed. In 364, the Senate attempted three separate expiations, including the adoption of an Etruscan ritual. In 293, the Senate began the multi-year process of importing the cult of Asclepius from Epidaurus only after other expiations had failed.

Both the religious experimentation inspired by epidemic disease and the Senate's attempts to control the popular religious reaction must be read against the backdrop of the various other types of healing available in Rome throughout the Republican period. Greek professional medicine may not have been an appropriate response to an epidemic due to its own limitations, but central Italy was host to a number of sanctuaries and sacred springs that were sites of popular medicine.<sup>232</sup> None of the familiar aspects of these sanctuaries, such as sacred water or anatomical votives, is ever mentioned in conjunction with epidemics in historical sources. With the exception of the honors paid to Apollo Medicus, Asclepius, and Salus, there is nothing inherently medical or even disease-focused about the content of the expiations themselves, which were generally no different in character from expiations used in other situations. In other words, the public nature of an epidemic and its disruption to state functioning conceptually differentiated epidemic disease from smaller-scale infectious diseases and non-infectious ailments. Medicine, whether Greek or popular, might heal a sick individual, but in the Republican period, at

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<sup>231</sup> A useful point of comparison is the Bacchanalia crisis of 186 BCE (Livy 39.8-19; CIL I<sup>2</sup>.581 = ILS 18). On the position of the Republican Senate with regard to unsanctioned religion, see Orlin 2010, Takács 2000, Cancik-Lindemaier 1996, and North 1979.

<sup>232</sup> Edlund-Berry 2006a and 2006b.

least, a disease that was a collective threat had to be addressed by action that was not just public but officially organized by Senators on behalf of the state and in consultation with state religious authorities.

It is this collective and public nature that pushes official expiation as a response to epidemic disease into the realm of popular medicine. Just as a sick individual might turn to a healing cult when it became clear that Greek medicine would offer no relief, a collective disease could occasion a collective response that was both popular and public. As a rule, the priests who interpreted the cause of an epidemic disease and offered solutions were the very same priests who performed normal state rituals, and when the people at large took action it was usually at the behest of the Senate, in the form of individual or at-home rituals in the name of state gods. In the rare cases in which the Roman people independently turned to foreign gods and practices (Livy's *'superstitiones'*), they did so only after a Senatorial expiation had apparently failed, suggesting that public religious action was indeed the popular first-line response to epidemic disease in Republican Rome.

The decline in the treatment of epidemics as religious crises during the Principate does not necessarily reflect an actual decline in epidemics, and biological as well as political factors may have contributed to the relative lack of epidemics in the historical sources. As Pliny the Elder's description of new diseases claims, the disease pool at Rome was likely to have expanded along with the geographical reach of the empire during the first centuries BCE and CE. Additionally, migrants to the city who were previously unexposed to Rome's endemic diseases would likely have suffered even higher mortality due to endemic diseases

like malaria than would native Romans.<sup>233</sup> Rome's new human and pathogenic diversity could have decreased the visibility of epidemics like those in Livy's text, as Paine and Storey suggest. As opposed to periodic catastrophic epidemics striking a relatively homogenous population, immunologically speaking, the new norm would have been constant and concurrent small outbreaks of different diseases in different subpopulations, a situation that would have undermined the republican understanding of pestilence as something imposed on an entire (ethnically homogenous) civic body by angry deities after a discrete and identifiable infraction.

The low-mortality epidemics Pliny describes do not appear in Suetonius or Tacitus, evidence that the plagues mentioned in connection with emperors by the historians of the Principate by no means reflected the sum total of epidemics that struck Rome during this period. As noted above, the selective reportage of epidemics may well have been a feature of the annalistic lists as well, but the frequency at which epidemic diseases became state crises was indisputably much higher during the Republic. The presence of the plagues of 65 and 80 in the narratives of Suetonius and Tacitus suggests that epidemic diseases could still, in certain circumstances, be treated as something to be addressed by the government, but in neither case is anything remotely as formal as the Republican Senatorial expiations mentioned. Furthermore, neither Nero nor Titus is credited with having ended the pestilence in his reign. What made Titus's response more admirable than Nero's was the compassion and material support he showed for the epidemic's victims, and not the

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<sup>233</sup> Although many migrants to Rome would have come from malarial regions and therefore would have had some degree of immunological protection, those from areas without endemic malaria, such as northeast Italy, much of Gaul, and any high-altitude regions throughout the empire, would be especially susceptible to Rome's seasonal peaks of malaria.

appearance of having exercised any control over the spread or severity of the disease itself. The failure of Titus's sacrifices and prayers during the epidemic of 80 is, in other words, not presented as a failure of government or state religion.<sup>234</sup>

This change in the official treatment of epidemic disease may reflect a fundamental shift in Roman state religion beyond even the cessation of the production of prodigy lists. During the Republic, culpability for divine displeasure caused by political or religious impropriety was spread among the members of the Senate and to a lesser extent the citizenry as a whole. Accordingly, all stakeholders in the Roman state had the duty to rectify such problems collectively. Such logic became untenable during the empire. Augustus became Pontifex Maximus in 12 BCE, and every emperor until Gratian held the office thereafter. As the head of state religion, the culpability for procedural impropriety would ultimately lie with the emperor himself.

It should be noted that a change in the religio-political understanding of epidemic disease by no means implies a change in popular attitudes toward religious healing more generally. In fact, as Trevor Luke has suggested, the Flavian period may have seen the invention of an imperial healing cult similar to those of Asclepius and Serapis but focused on the person of the emperor both after his death and, remarkably, during his life.<sup>235</sup> Like the older healing cults, however, those focused on deified emperors would have treated

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<sup>234</sup> Cf. the epidemics of 428 and 365-363 BCE (Livy 4.30.9-11 and 7.1-3), in which the apparent failure of first-line Senatorial expiations sparked religious crises.

<sup>235</sup> Luke 2010.

only individual supplicants, and therefore would have been of little perceived use during a full-blown epidemic.<sup>236</sup>

While compiling the ten features of the “classic plague narrative” against which he would compare the impact of the Antonine Plague, Duncan-Jones relied primarily on a) Senatorial responses to epidemics of the Republican period and b) late antique Christian interpretations of historical epidemics. A better comparison may have been the plagues under Nero and Titus, which were significantly closer to the Republic both in time and in terms of cultural/political context. Though they make for an extremely small sample size and were more limited in scale than the Antonine Plague, the two first-century high-mortality epidemics can serve as models for a new imperial mode of state response to pestilence, the latter positive and the former negative. In neither case is the Senate or any college of priests mentioned, nor is any procedural transgression identified as the reason for the epidemic.

With the epidemics of 65 and 90 as precedent, the few and *ad hoc* imperial actions reported during the initial outbreak of the Antonine Plague—such as Marcus Aurelius paying for the funerals of plague victims—fit well into the Principate model for appropriate state reaction to an epidemic. As the attention paid to Apollo Clarios by municipalities and individuals shows, the transgression/expiation model of epidemic disease causation was by no means obsolete. It was, however, no longer an essential part of the official Roman state apparatus, although Decius seems to have attempted to revive something similar to the practice in the middle of the third century.

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<sup>236</sup> The recipients of the two miracle cures ascribed to Vespasian did not even suffer from infectious diseases: one was blind and the other lame (Tac. *Hist.* 4.81.1).



While it surpasses the purview of this study, the Christian understanding of epidemics as a punishment from God that developed over the course of the fourth and, especially, fifth centuries strongly influenced the ways in which the Christian emperors reacted to crises of disease.<sup>237</sup> As Orosius's treatment of the Antonine and Cyprianic plagues shows, this new understanding also spurred a revision of the etiologies and even the timelines of older histories of epidemic disease. In the case of the Antonine Plague, the plague-as-Christian-*ultio* model imposed a universal, centralized religious meaning onto an event that in its own time seems to have inspired religious action only on smaller, fragmented scales. In the case of the Cyprianic Plague, later Christian writers essentially inverted the pagan narrative of the epidemic promulgated by the edict of Decius, which, despite its similarity to instances of Republican-era emergency legislation, was extraordinary in the context of the Empire.

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<sup>237</sup> Stathakopoulos 2004 catalogues the known epidemics and famines that struck the Roman Empire between 284 and 750 CE.

## Aqueducts, Political Power, and the Roman State

In the introduction to his comprehensive study on Roman aqueducts, Hodge argues against historians who have interpreted Roman aqueducts as a public health measure.

As the mainstream of scholarly thought in ancient history has moved further away from conventional tradition and veered more toward an emphasis on social history, one has sometimes seen the aqueducts appraised in a new light and lauded for a new virtue. What other early civilisation, we are asked, set such store by public hygiene, by abundant pure drinking water, by the very essentials of health and life? On this bases, do not the aqueducts rank as Rome's greatest and proudest achievement? To the social historian the argument is irresistible, so we may well declare clearly that it is almost wholly false... Nearly all Roman cities grew up depending for their water on wells or cisterns in the individual houses, and some cities got through their entire history without ever having an aqueduct at all... [T]he aqueducts, then, were not built to fill a basic human need. They were in fact a luxury.<sup>238</sup>

The Romans themselves, however, do not seem to have shared Hodge's binary (health *or* luxury) perspective. Water had been closely tied to Greco-Roman ideas of health since the early days of professional medicine. Pliny the Elder devoted much of Book XXXI of his *Natural History* to the medicinal benefits of various types of water, citing a whole gamut of medical authorities ranging from Greek physicians to folklore. While he names springs, rivers, and lakes all over the known world, Pliny declares the healthiest (*salubritatis*) water

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<sup>238</sup> Hodge 2002, 5.

in the entire world to be that delivered to Rome by one of its earliest aqueducts, the Aqua Marcia.<sup>239</sup>

In addition to Pliny the Elder, multiple Roman sources from our time period explicitly associate aqueducts with health, and, in particular, with *public* health. In his life of Augustus, Suetonius contrasts the practical utility of aqueducts with the frivolous demagoguery of providing cheap wine:

To show that he was a prince who desired public health rather than popularity, when the people complained of the scarcity and high price of wine, he sharply rebuked them by saying: "My son-in-law Agrippa has taken good care, by building several aqueducts, that men shall not go thirsty."<sup>240</sup>

Similarly, Frontinus refers to the benefits of the aqueduct system for the health of Roman citizens throughout his *De aquaeductu*. Near the beginning of the treatise he neatly sums up his position by saying that the curator aquarum is an office "tum ad salubritatem atque etiam securitatem urbis pertinens:" it pertains to both the healthfulness and even the security of the city.<sup>241</sup> Vitruvius similarly says that water sources considered being used for urban aqueducts should be chosen with great care for their effects on human health.<sup>242</sup> Especially noteworthy in light of Hodge's characterization of aqueducts as, fundamentally,

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<sup>239</sup> Pliny the Elder, *NH* 31.24.41: "Clarissima aquarum omnium in toto orbe frigoris salubritatisque palma praeconio urbis Marcia est inter reliqua deum munera urbi tributa."

<sup>240</sup> Suetonius, *Augustus* 42.1: "Sed ut salubrem magis quam ambitiosum principem scires, querentem de inopia et caritate vini populum severissima coercuit voce: satis provisum a genero suo Agrippa perductis pluribus aquis, ne homines sitirent." Trans. adapted from that of J. C. Rolfe.

<sup>241</sup> Frontinus *De Aquaeductu* I.1.

<sup>242</sup> Vitruvius, *De architectura* 7.28: "quare magna diligentia industriaque quaerendi sunt et eligendi fontes ad humanae vitae salubritatem."

luxuries is a pair of letters between Pliny the Younger and the emperor Trajan, which I further discuss toward the end of this chapter. In these letters, the two men respectively refer to the intrinsic value of a proposed aqueduct in the city of Sinope as “et salubritati et amoenitati” and “et salubritati et voluptati.”<sup>243</sup> To these powerful men, the concepts of health and pleasure were by no means at odds: aqueducts were important precisely because they provided both.

While Pliny the Younger and Trajan discussed the construction of aqueducts in the provinces in these and other letters, the aqueducts that terminated in Rome itself will be the primary focus of this chapter. One aspect that differentiates the aqueducts of Rome from those outside the capital is simply their number. Hodge is certainly correct that the water systems of a majority of Roman cities and towns were in no way comparable to that of Rome. As most of the population of the Roman Empire seems to have lived in rural areas, it makes perfect sense that, per capita, most Romans would have gotten their water from wells, cisterns, and directly from springs.<sup>244</sup> More intriguing is the fact that Rome’s water system dwarfed those of the other very large cities of the ancient Mediterranean, including Constantinople after it became the seat of the Roman Empire.<sup>245</sup> Additionally, and just as (if not more) importantly for the present topic, Rome’s aqueducts held a political significance that those outside the capital could not. The city’s first conduits were built in the Middle Republic by important senators, making them a physical reminder of the city’s storied heritage that retained power even as the political meaning of that heritage evolved. It is no

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<sup>243</sup> Pliny the Younger, *Ep.* 10.90, 91.

<sup>244</sup> On population density in Roman Italy, see De Ligt 2012, especially Chapter 5.

<sup>245</sup> Ward-Perkins 2012, 65. Crow, 2008.

accident, for example, that Cicero emphasizes Clodia's alleged perversion of the waters brought to the city by her ancestor Appius Claudius Caecus when building his case against her moral character in the *Pro Caelio*. "Was it for this," Cicero says in the assumed voice of Appius, "that I brought water into the city, that you should use it for your impious purposes?"<sup>246</sup>

## **I. The political history of Rome's aqueducts**

While they were always politically significant, the precise political meaning of aqueducts changed substantially over the course of Roman history. In fact, when Cicero delivered the *Pro Caelio* in 56 BCE, a major turning point in the use of aqueducts by the Roman ruling elite was on the horizon. As I will discuss below, this change both resulted from and reflected developments in Rome's political system itself as Augustus's vision of the Principate took shape.

### *a. The Republican period: ambition in the public interest*

The first Roman aqueduct, the Aqua Appia, was constructed in 312 BCE during the politically charged censorship of Appius Claudius Caecus. Livy elliptically describes the year as follows:

This year (312 BCE) was signaled by the censorship of Appius Claudius. His claim to distinction with posterity rests mainly upon his public works, the road and the aqueduct which bear his name. He carried out these undertakings single-handed, for, owing to the odium he incurred by the way he revised the senatorial lists and filled up the vacancies, his colleague, thoroughly ashamed of his conduct, resigned. In the

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<sup>246</sup> Cicero, *Pro Caelio* 34: "ideo aquam adduxi, ut ea tu inceste uterere, ideo viam munivi, ut eam tu alienis viris comitata celebrares?"

obstinate temper which had always marked his house, Appius continued to hold office alone.<sup>247</sup>

Diodorus Siculus offers more details:

In Rome in this year censors were elected, and one of them Appius Claudius, who had his colleague, Lucius Plautius, under his influence, changed many of the laws of the fathers; for since he was following a course of action pleasing to the people, he considered the Senate of no importance. In the first place he built the Appian Aqueduct, as it is called, from a distance of eighty stades to Rome, and spent a large sum of public money for this construction without a decree of the Senate. Next he paved with solid stone the greater part of the Appian Way... he expended the entire revenue of the state but left behind a deathless monument to himself, *having been ambitious in the public interest*. He also mixed the Senate, enrolling not merely those who were of noble birth and superior rank as was the custom, but also including many sons of freedmen. For this reason those were incensed with him who boasted of their nobility. He also gave each citizen the right to be enrolled in whatever tribe he wished, and to be placed in the census class he preferred. In short, seeing hatred toward himself treasured up by the most distinguished men, he avoided giving offence to any of the other citizens, securing as a counterpoise against the hostility of the nobles the goodwill of the many.<sup>248</sup>

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<sup>247</sup> Livy 9.29.7: “Et censura clara eo anno Ap. Claudi et C. Plauti fuit; memoriae tamen felicioris ad posteros nomen Appi, quod uiam muniuit et aquam in urbem duxit; eaque unus perfecit quia ob infamem atque inuidiosam senatus lectionem uerecundia uictus collega magistratu se abdicauerat, Appius iam inde antiquitus insitam pertinaciam familiae gerendo solus censuram obtinuit.” See also 9.30.1 and 9.46.10-11.

<sup>248</sup> Diod. Sic. 20.36.1-4: “έν δέ τῆ Ῥώμῃ κατὰ τοῦτον τὸν ένιαυτὸν τιμητὰς εἶλοντο καὶ τούτων ὁ έτερος Ἄππιος Κλαύδιος ὑπήκοον έχων τὸν συνάρχοντα Λεύκιον Πλαύτιον πολλὰ τῶν πατρῶων νομίμων έκίνησε: τῷ δήμῳ γάρ τὸ κεχαρισμένον ποιῶν οὐδένα λόγον έποιεῖτο τῆς συγκλήτου. καὶ πρῶτον μὲν τὸ καλούμενον Ἄππιον ὕδωρ ἀπὸ σταδίων ὀγδοήκοντα κατήγαγεν εἰς τὴν Ῥώμην καὶ πολλὰ τῶν δημοσίων χρημάτων εἰς ταύτην τὴν κατασκευὴν ἀνήλωσεν ἄνευ δόγματος τῆς συγκλήτου: μετὰ δέ ταῦτα τῆς ἀφ’ έαυτοῦ κληθείσης Ἀππίας ὁδοῦ τὸ πλεῖον μέρος λίθοις στερεοῖς κατέστρωσεν ἀπὸ Ῥώμης μέχρι Καπύης, ὄντος τοῦ διαστήματος σταδίων πλείονων ἢ χιλίων, καὶ τῶν τόπων τοὺς μὲν ὑπερέχοντας διασκάψας, τοὺς δέ φαραγγώδεις ἢ κοίλους ἀναλήμμασιν ἀξιολόγοις έξισώσας κατηνάλωσεν ἀπάσας τὰς δημοσίας προσόδους, αὐτοῦ δέ μνημεῖον ἀθάνατον κατέλιπεν, εἰς κοινὴν εύχρηστίαν φιλοτιμηθείς. κατέμιξε δέ καὶ τὴν σύγκλητον, οὐ τοὺς εύγενεῖς καὶ προέχοντας τοῖς ἀξιώμασι προσγράφων μόνον, ὡς ἦν έθος, ἀλλὰ πολλοὺς καὶ τῶν ἀπελευθέρων υἱοὺς ἀνέμιξεν: έφ’ οἷς βαρέως έφερον οἱ καυχώμενοι ταῖς εύγενείαις. έδωκε δέ τοῖς πολίταις καὶ τὴν έξουσίαν έν ὁποῖα τις βούλεται φυλῆ τάττεσθαι καὶ ὅποι

Diodorus makes clear the reason for Plautius' resignation: Appius had used his censorial powers to radically restructure the senate, stocking empty seats with the sons of freedmen.<sup>249</sup> Even before he comes to the freedmen, however, Diodorus uses politically charged language to describe Appius: because Appius "was following a course of action pleasing to the people, he considered the senate of no importance," and furthermore the Appian Way was in fact a "deathless monument" to the censor, and Appius in building it was, in a curious turn of phrase, "ambitious in the public interest" (εἰς κοινὴν εὐχρηστίαν φιλοτιμηθεῖς). Regarding the aqueduct itself, Diodorus claims that Appius used "a large sum of public money without a decree of the senate."

Scholars of Roman history have interpreted Appius' actions in 312 BCE in various ways. Mommsen, relying above all on Diodorus' account, saw Appius as (to use MacBain's words) a "revolutionary demagogue – a sort of Roman Cleisthenes or Pericles and a spiritual forerunner of Julius Caesar."<sup>250</sup> This interpretation, however, ignores other anecdotes from Appius' political career that suggest he was a more conservative figure, most especially his opposition to the *lex Ogulnia* of 300 BCE, which would have granted

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προαιροῖτο τιμήσασθαι. τὸ δ' ὅλον, ὁρῶν τεθησαυρισμένον κατ' αὐτοῦ παρὰ τοῖς ἐπιφανεστάτοις τὸν φθόνον, ἐξέκλινε τὸ προσκόπτειν τισὶ τῶν ἄλλων πολιτῶν, ἀντίταγμα κατασκευάζων τῇ τῶν εὐγενῶν ἀλλοτριότητι τὴν παρὰ τῶν πολλῶν εὐνοίαν."

<sup>249</sup> Or, as Suetonius claims, the grandsons of freedmen. Suet. *Claud.* 24.1.

<sup>250</sup> Mommsen 1864, 301; see also MacBain 1980, 357.

plebeians greater access to priesthoods, his refusal to accept plebeian interreges, and his attempt to illegally secure the consulship for two patricians.<sup>251</sup>

To reconcile the two pictures of Appius that emerge from the ancient sources, MacBain proposed a realist interpretation: due to the gens Claudia's 4<sup>th</sup> century obscurity, Appius in 312 would probably have lacked a clientele large enough to match his ambitions. Having obtained the censorship, he dedicated himself to winning the loyalty of Rome's voters.<sup>252</sup> The progressive-seeming innovations of his censorship were certainly demagoguery, but not in the name of any political program beyond the furthering of Appius' career. The Aqua Appia and the Via Appia were so successful in this aim that Appius could afford to show little concern for the non-elite in his later career, with little harm to his standing in the Senate. Projecting the factional politics of the late Republic backward to the fourth century only confuses the matter; it was possible for Appius to be at once a demagogue and a conservative. Still, the controversy surrounding Appius' acts as censor in 312, and the great success of the Appian public works from Appius' perspective, are a good illustration of how powerful a political tool an aqueduct could be, and the blatantly clientele-focused reasons for which they were built in the Republic.

The next two aqueducts, the Anio Vetus and the Aqua Marcia, therefore should also be considered in their political contexts. Manius Curius Dentatus started the Anio during his 272 B.C. censorship using booty from the Pyrrhic war, but apparently left the aqueduct

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<sup>251</sup> MacBain 1980, 356n2, helpfully collects the ancient evidence for the various views of Appius. *lex Ogulnia*: Livy 10.7; interreges: Livy 10.11.10, Cic. Brut. 55, Auct. Vir. Illus. 34.3; patrician consuls: Livy 10.15.

<sup>252</sup> MacBain 1980, 361. The major flaw of MacBain's thesis, which is otherwise very attractive, is that it does not explain how Appius came to be censor in the first place.



unfinished when his term ended. Two years later the senate created a special board of two consisting of Curius Dentatus and Fulvius Flaccus for the purpose of completing the aqueduct, along with a budget for doing so.<sup>253</sup> In 179 B.C., the censors M. Aemilius Lepidus and M. Fulvius Nobilior put out contracts for a new aqueduct, though this one was never finished due to M. Crassus refusing to sell a part of his land that lay in the aqueduct's path.<sup>254</sup> The need for a new water source around this time may be hinted at in Plutarch's biography of Cato. Here, a campaign to curtail the private use of public water during his time as censor (in 184 B.C.) is listed prominently among the actions that secured Cato's reputation as excessively strict from the perspective of wealthy Senators.<sup>255</sup> Plutarch continues to say that the general public viewed this and Cato's other actions so favorably that they erected a statue of him in the temple of Salus on the Quirinal.<sup>256</sup>

The Aqua Marcia was the first aqueduct not to be begun at the initiative of an individual censor. Quintus Marcius Rex, after whom the aqueduct was named, was in 144 B.C. a

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<sup>253</sup> Frontinus *De Aquaeductu* 1.6.1. Frontinus is careful to point out that, due to Curius' death, the aqueduct was officially completed by Flaccus alone and so Flaccus, like Appius before him, took full credit for completing the work.

<sup>254</sup> Livy 60.51.7.

<sup>255</sup> Plut. *Cato* 19.1: "Οὐ μὴν ἀλλὰ τῶν ἐγκαλούντων ἐλάχιστα φροντίζων ὁ Κάτων ἔτι μᾶλλον ἐπέτεινεν, ἀποκόπτων μὲν ὀχετοὺς οἱ τὸ παραρρέον δημόσιον ὕδωρ ὑπολαμβάνοντες ἀπήγον εἰς οἰκίας ἰδίας καὶ κήπους, ἀνατρέπων δὲ καὶ καταβάλλων ὅσα προὔβαινεν εἰς τὸ δημόσιον οἰκοδομήματα, συστέλλων δὲ τοῖς μισθοῖς τὰς ἐργολαβίας, τὰ δὲ τέλη ταῖς πράξεσιν ἐπὶ τὰς ἐσχάτας ἐλαύνων τιμᾶς. ἀφ' ὧν αὐτῷ πολὺ συνήχθη μῖσος."

<sup>256</sup> Plut. *Cato* 19.3: "ἀνδριάντα γοῦν ἀναθεὶς ἐν τῷ ναῷ τῆς Ὑγιείας ἐπέγραψεν οὐ τὰς στρατηγίας οὐδὲ τὸν θρίαμβον τοῦ Κάτωνος, ἀλλ' ὡς ἂν τις μεταφράσειε τὴν ἐπιγραφὴν, 'ὅτι τὴν Ῥωμαίων πολιτείαν ἐγκεκλιμένην καὶ ῥέπουσαν ἐπὶ τὸ χεῖρον τιμητῆς γενόμενος χρησταῖς ἀγωγαῖς καὶ σώφροσιν ἔθισμοῖς καὶ διδασκαλίαις εἰς ὀρθὸν αὖθις ἀποκατέστησε.'"

praetor urbanus.<sup>257</sup> The senate commissioned Marcius to perform a complete overhaul of Rome's water system due to the fact that "the conduits of Appia and Anio Vetus had become leaky by reason of age, and water was also being diverted from them unlawfully by individuals."<sup>258</sup> Marcius was to "reclaim and repair these conduits, and since the growth of the city was seen to demand a more bountiful supply of water, the same man was charged by the senate to bring into the city other waters so far as he could."<sup>259</sup> The senate earmarked 180 million sesterces for the renovation and expansion of the aqueduct system according to Frontinus' source Fenestella, and also extended Marcius' praetorship to allow for the project's uninterrupted completion.<sup>260</sup>

Frontinus tells a strange story regarding Marcius' multiyear project that reveals that not all members of the Roman elite approved of this extended command:

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<sup>257</sup> Morgan 1978, 27: "That the task or tasks specified in this passage should have fallen to a praetor rather than to one of the consuls for 144 may appear unusual, but it is scarcely inexplicable. It is conceivable, for example, that Servius Galba and L. Cotta had already left Rome for whatever provinces were assigned to them...[I]f the consuls were in Rome when the state of the aqueducts came up, it should have been clear to all concerned that assigning the work to either man would merely imperil the funds he received, ultimately HS 180 million, while arousing his colleague to new heights of obstructiveness." This does not address, however, the fact that the construction of the previous two aqueducts clearly fell within censorial purview.

<sup>258</sup> Morgan 1978, 29-31 considers and dismisses a natural disaster (i.e. a drought) as the precipitating cause for the new construction after thirty-five years of inactivity with regard to aqueducts, concluding that "The problem... was strictly man-made," that is, that the wear of time on the existing aqueducts coupled with Rome's increased population were sufficient cause.

<sup>259</sup> Frontinus *De Aquaeductu* 1.7.1: Et quoniam incrementum urbis exigere videbatur ampliorem modum aquae, eidem mandatum a senatu est, ut curaret, quatenus alias aquas posset in urbem perducere.

<sup>260</sup> As Morgan 1978, 35 points out, Frontinus says "ad consummandum *negotium*," not "opus." Perhaps the extension of command was intended only to allow for the arrangement of contracts.

At that time the Decemvirs, on consulting the Sibylline Books for another purpose, are said to have discovered that it was not right for the Marcian water, or rather the Anio (for tradition more regularly mentions this) to be brought to the Capitol. The matter is said to have been debated in the Senate, in the consulship of Appius Claudius and Quintus Caecilius [=143 BCE], Marcus Lepidus acting as spokesman for the Board of Decemvirs; and three years later [=140 BCE] the matter is said to have been brought up again by Lucius Lentulus, in the consulship of Gaius Laelius and Quintus Servilius, but on both occasions the influence of Marcius Rex carried the day; and thus the water was brought to the Capitol.<sup>261</sup>

Astin argues that the first possibility is correct here and that “the Decemviri must have intervened from political motives and through hostility to Marcius.”<sup>262</sup> By blocking the extension of the Marcia to the Capitol, the decemviri would diminish the centrality of the Aqua Marcia to the state and thereby Marcius’ political benefit from it.<sup>263</sup> Morgan disagrees, arguing that the reason the decemviri attempted to block the aqueduct was rather that it would destroy or open for development a desirable parcel of public land on the Capitoline which the decemviri had been illegally using for their own purposes.<sup>264</sup>

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<sup>261</sup> Frontinus *De Aquaeductu* 1.7: “Eo tempore decemviri, dum aliis ex causis libros Sibyllinos inspiciunt, invenisse dicuntur, non esse fas aquam Marciam seu potius Anionem ( de hoc enim constantius traditur ) in Capitolium perduci, deque ea re in senatu M. Lepido pro collegio verba faciente actum Appio Claudio Q. Caecilio consulibus, eandemque post annum tertium a Lucio Lentulo retractatam C. Laelio Q. Servilio consulibus, sed utroque tempore vicisse gratiam Marci Regis: atque ita in Capitolium esse aquam perductam.”

Neither of the decemviral objections appears in Obsequens’ epitome, but the 143 BCE one does appear in Livy, *ep. Oxy.* 54.: “...devota est aqua An{n}io. | aqua [Marcia in Capi]tolium contra Sibyllae carmina [perducta...].”

<sup>262</sup> Astin 1961, 541-548.

<sup>263</sup> On the gradient of aqueducts, see Hodge 2002, 176–191.

<sup>264</sup> Morgan 1978, 49.

Regardless of the reason for the decemviral opposition to the project, the huge sum of public money invested in the renovation and expansion of the aqueduct system and the unusual step of extending a praetor's command for a civic, not military, program show the importance of the project to the senate.<sup>265</sup> The construction of aqueducts had previously been an individual undertaking, and one that would have meant political gain for the instigator. Among the projects of 144, the Aqua Marcia certainly worked in this way for Marcus Rex (and his late Republican descendant of the same name, who proudly featured the Aqua Marcia on his 56 BCE denarius).<sup>266</sup> The renovation of the other aqueducts, however, had become to some degree a collective concern.<sup>267</sup>

It is difficult to say much about the construction of the relatively small Aqua Tepula.<sup>268</sup> Frontinus tells us it was built in 125 BCE by the censors Cn. Servilius Caepio and L. Cassius Longinus Ravilla, and that it originated in the estate of Lucullus.<sup>269</sup> From its physical remains we know that the Tepula used much of the same infrastructure as the

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<sup>265</sup> As Morgan 1978, 35 puts it, in financing the Aqua Marcia the Senate showed that they were "keenly interested in a significant improvement in living conditions in Rome."

<sup>266</sup> Crawford 425/1.

<sup>267</sup> The Senatorial resolution quoted in Frontinus, *De Aquaeductu* 125, to be dealt with below, gives a sense of what types of upkeep were required.

<sup>268</sup> Frontinus at *De Aquaeductu* 68.1 tells us that the volume of water carried by the Tepula was 400 quinariae, compared with the 2,162 quinariae supposed to be brought in by the Marcia (Front. 67.1), 1,541 by the Anio Vetus (Front. 66.1), and 841 by the Appia (Front. 65.1). The volume of the Tepula appears to have been larger originally, as Frontinus claims that the springs used for it were "cut off" in 33 BCE with the construction of the Aqua Julia (Front. 9.1 and 68.2).

<sup>269</sup> Frontinus *De Aquaeductu* 1.8.

Marcia, “piggybacking” on the latter’s arcade system in the Roman Campagna.<sup>270</sup> In any case, the Tepula was the last aqueduct built until the 33 BCE Aqua Julia. The gap of almost a century, despite the growth in Rome’s population and the deteriorating condition of the existing aqueducts,<sup>271</sup> has been explained politically: “the senate aimed to prevent the self-aggrandizement of individual powerful men.”<sup>272</sup> This explanation of the gap in aqueduct construction was first articulated by Harris, although it was informed by Wiseman’s discussion of the contemporaneous cessation of road-building activity.<sup>273</sup>

The building of the Republican aqueducts was largely an individual activity, a public performance of beneficence that served as a political tool and was mostly conducted outside the formal apparatus of the state. Once an aqueduct was completed, however, it became the possession of the Roman people. In order to remain functional, an aqueduct requires three primary types of upkeep to maintain the original volume of water supply. The first is the periodic removal of calcium carbonate buildup or *sinter*.<sup>274</sup> The degree to which *sinter* was a problem depended on the hardness of the source water; those

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<sup>270</sup> Hodge 2002, 168; see fig. 121 on p.166. Frontinus identifies the three channels supported by the Marcia’s arches as (from top to bottom) Julia, Tepula, and Marcia. Frontinus *De Aquaeductu* 19.3.

<sup>271</sup> See Frontinus *De Aquaeductu* 9.9 and Augustus, *Res Gestae* 10.

<sup>272</sup> Campbell 2012, 237.

<sup>273</sup> Harris 1979, 159 on large-scale building and ambition: “The first-century Senate tended to oppose commands of unusual extent or duration. It showed itself more cautious than formerly in allowing individuals advantageous civilian opportunities of performing public services. Thus from the last decade of the second century there was an otherwise unexplained halt in major road-construction, and similarly no more major aqueducts were built at Rome between the Aqua Tepula (125) and Agrippa’s Aqua Iulia (33).” See also Wiseman 1970.

<sup>274</sup> For a discussion of the chemistry and physics of *sinter*, see Hodge 2002, 228.

aqueducts that used springs as sources (rather than rivers or lakes) would be most susceptible.<sup>275</sup> Left unchecked, this incrustation diminished the capacity of water pipes. The second, the removal of the buildup of silt, sand, and other debris, was more crucial in river-fed aqueducts like the Anio Vetus. Though checked somewhat by the presence of settling tanks, a buildup of sediment in the pipes would also necessitate periodic manual removal.<sup>276</sup> The final type of necessary aqueduct upkeep is a social, rather than natural, one: the flow of water could be diminished by water pirating, the illegal siphoning of water from the aqueduct channels to private estates. In his treatise against such pirating in the late first century CE, Frontinus makes reference to Republican examples of the same practice in 144 and 50 BCE.<sup>277</sup>

Despite all these threats to the continuous proper functioning of the aqueduct system, there was no formal entity charged with its protection until Augustus created the office of *curator aquarum*. Instead, the senate seems to have only addressed issues with existing aqueducts when there was a real crisis, as in the Marcian program of 144 BCE. Frontinus does mention a kind of self-policing against water pirating; each *vicus* would select two men “by whose discretion water would flow for public use.”<sup>278</sup> The effectiveness of this system is doubtful, however, given the perennial nature of the problem. Until Augustus found a way to use the renovation of crumbling infrastructure as propaganda for the

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<sup>275</sup> Hodge 2002, 72.

<sup>276</sup> Hodge 2002, 273.

<sup>277</sup> See Peachin 2004, 100, citing Front. *De aquaeductu* 7.1 and 76., as well as Livy 39.44.4-5 and Plutarch *Cat. Ma.* 19.1.

<sup>278</sup> Front. *De aquaeductu* 97.8; Peachin’s translation. “quorum arbitrato aqua in publico saliret.”

effectiveness of his new regime, there was little incentive for any individual Roman to invest in the maintenance of another politician's aqueduct. At the same time that senatorial tensions seem to have contributed to the cessation of new aqueduct construction after 125 BCE, the lack of political prestige associated with the renovation of existing infrastructure likely contributed to the deteriorating state of the public water system in the late Republic.

*b. The Julio-Claudian period*

A byproduct of the end of the Republic was an end to the political deadlocks caused by senatorial factionalism and competition. Though fundamentally changed, the everyday workings of government, including the census and public works projects, began to function more or less regularly.<sup>279</sup> A clue to the importance of such seemingly banal civic tasks can be found in the *Res Gestae*, where Augustus proudly emphasizes his role as *restitutor* of the crumbling physical and cultural infrastructure of Rome.<sup>280</sup> Among other physical improvements to the city, which included completing both the Julian Forum and the Theater of Pompey (an ingenious way to subsume the political connotations of those structures into the new regime), Augustus states that:

I restored the channels of the aqueducts which in several places were falling into disrepair through age, and doubled the capacity of the aqueduct called the Marcia by turning a new spring into its channel.<sup>281</sup>

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<sup>279</sup> As noted above, the first census since 69 BCE was conducted in 28 BCE, under Augustus.

<sup>280</sup> Thornton 1986, 28 put it as follows: "The Julio-Claudians had, of course, to construct temples, basilicas and monuments; new dynasties need such psychological proof of power; even more important they had to meet the city's physical needs: to feed it, to furnish it water, and to provide it with the means of human enjoyment – the citizens of Rome needed to eat, to drink, and to be merry."

<sup>281</sup> *Res Gestae* 20.10-12.

While Augustus here takes sole credit for restoring and enlarging the aqueduct system, histories of the period are clear that it was Marcus Vipsanius Agrippa, Augustus' close friend and general, who actually organized the work. These sources – most importantly Dio, but also Pliny the Elder and Frontinus – also show that Agrippa was recognized to be the magistrate in charge of the water system overhaul, that he did so out of his own pocket, and that he was very public in doing so, much like the Republican aqueduct builders.<sup>282</sup>

Still, the ultimate credit went to Augustus: the grand new aqueduct of the age was not called the Aqua Vipsania, but rather the Aqua Julia.<sup>283</sup> A close examination of the renovation of the urban hydraulic systems and the creation of the office of the curator aquarum reveals the complex and intractable way in which the aqueducts of Rome became a cornerstone of imperial power. If we accept that the aqueducts were intrinsically tied to urban health in Roman minds, Agrippa's water program and its aftermath represent a leap toward the image of the emperor as the giver of health, or at least the securer of the environmental conditions necessary for it.<sup>284</sup>

Agrippa was made aedile in 34 BCE, a fact notable because by that time he had already been not only consul but also governor of a province, both before the traditional

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<sup>282</sup> Frontinus *De Aquaeductu* 98, Dio 49.42.2-43.1, Pliny the Elder *NH* 31.24.41 and 36.24.121.

<sup>283</sup> For the argument that the construction of the Aqua Julia had actually been begun by Julius Caesar before his death, see Ashby 1935, 161 and Shipley 1933, 26-28.

<sup>284</sup> On the importance of water purity for health, and the exceptionally healthy qualities of some Roman aqueduct water, Pliny the Elder *NH* 31.21.31-25.42; Vitruvius, *De Architectura* book 8 throughout, and especially 8.3.28, 8.4, and 8.6; Frontinus *De Aquaeductu* 1, 88, and 111.



consular age of 43. Through these two earlier offices, Agrippa worked to secure the primacy of Octavian, first quelling an uprising in Transalpine Gaul as governor in 39 or 38, and then organizing and leading Octavian's campaign against Sextus Pompey as Octavian's co-consul. Furthermore, Agrippa went on to hold the consulship twice after his aedileship, in 28 and 27.<sup>285</sup>

As part of his water plan, Agrippa oversaw the construction of the new Aqua Julia (begun in 33) and Aqua Virgo (begun in 21/20), and the restoration and expansion of the Aqua Marcia, as well as a reworking of the course of the Aqua Tepula to supply the new eastern neighborhoods of Rome.<sup>286</sup> He also oversaw a cleaning and restoration of the sewers.<sup>287</sup> Maintenance of the existing structures was sorely needed after a century of neglect.<sup>288</sup> Agrippa, however, went beyond simply repairing and cleaning the existing infrastructure, and his plan represented a fundamental change in the water system as an institution. As Evans notes, the new construction and the alterations to existing conduits were carried out in a way that maximized the availability of water in newly developed parts of the city.<sup>289</sup> Furthermore, the projected usage category of water from each source was considered in the plan. The Tepula, for example, was judged to be primarily devoted to

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<sup>285</sup> Shipley 1933, 19.

<sup>286</sup> The Gardens of Maecenas on the Esquiline hill, described by Horace in *Satires* 1.8.14, are representative of the upscale new character of the neighborhood.

<sup>287</sup> Dio 49.43.1, Pliny the Elder *NH* 36.24.104.

<sup>288</sup> Regarding the state of the water system in 33 BCE: Frontinus calls it "paene dilapsos" at *De Aquaeductu* 9.9.

<sup>289</sup> Evans 1982.

private use, while the majority of the water brought to the city by the Julia went to supplying new public buildings in the Campus Martius.<sup>290</sup>

By organizing maintenance of the water and sewer systems and regulating private access to aqueduct water, Agrippa performed duties technically within the remit of aedile.<sup>291</sup> The scale of his program, however, more resembled the actions of a Republican censor or special commissioner. During his 184 BCE censorship, Cato the Elder had embarked on a similar program of renovation, although his primary focus had been eliminating water piracy from the two existing aqueducts and no new aqueducts were built.<sup>292</sup> Q. Marcius Rex's special commission of 144 BCE, discussed above, is the other obvious comparandum, and Pliny the Elder compares it to Agrippa's in his narrative.<sup>293</sup>

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<sup>290</sup> The classifications of water *usus* were *nomine Caesaris* (used for the imperial residence and administration), *privatis* (private use granted by *beneficio principis*, possibly an Agrippan invention), and four types of public use: *castris* (military camps and possibly the barracks of *vigiles*), *operibus publicis* (public buildings, monuments, baths, theaters, etc.), *muneribus* (ornamental fountains that possibly served as emergency drinking water reservoirs), and *lacibus* (*lacus*, or neighborhood basins for public use, were likely the source of most drinking water). See Frontinus *De Aquaeductu* 78-86 and Evans 1982 and 1994.

<sup>291</sup> Per Frontinus *De Aquaeductu* 96, ordinary maintenance of the water supply and sewers, including investigating and putting an end to water piracy, was part of the duty of aediles and even quaestors. M. Caelius Rufus' trouble handling these duties during his aedileship are noted by Cicero (*ad fam.* 8.6.4) and Frontinus (*De Aquaeductu* 76).

<sup>292</sup> Livy 39.44, Plutarch *Cato Maior* 19. Cato was recognized for his actions as censor with a statue erected in the Temple of Salus on the Quirinal. According to Livy, Cato and his colleague used state funds for necessary aqueduct repairs.

<sup>293</sup> Pliny the Elder, *NH* 36.121: Sed dicantur vera aestimatione invicta miracula. Q. Marcius Rex, iussus a senatu aquarum Appiae, Anienis, Tepulae ductus reficere, novam a nomine suo appellatam cuniculis per montes actis intra praeturae suae tempus adduxit; Agrippa vero in aedilitate adiuncta Virgine aqua ceterisque conrivatis atque emendatis lacus DCC fecit, praeterea salientes D, castella CXXX, complura et cultu magnifica, operibus iis signa CCC aerea aut marmorea inposuit, columnas e marmore CCCC, eaque omnia annuo spatio.

While Agrippa's water program had some characteristically Republican aspects, it also marked an end to the use of the water system as a political tool for elite citizens. During his aedileship, Agrippa organized a permanent body of 250 slaves whose sole duty was to keep the water system in good working order. These slaves replaced the corporations of publicani who had vied for lucrative maintenance and construction contracts during the Republic, thus divorcing water system maintenance from one politically powerful sub-senatorial group.<sup>294</sup> After Agrippa's death in 12 BCE, this group of slaves became public property under the purview of an entirely new kind of magistrate, the *curatores aquarum*. A series of rescripts reported in Frontinus records the process of creation of the new office and the new laws instituted for the protection of the water supply.<sup>295</sup>

Under Augustus, a committee of three appointed *curatores* and a president, all senators, devoted three months a year to matters of the water supply, including maintenance and the letting of private water rights. During the rest of the year, the *praetor peregrinus* was responsible for the system.<sup>296</sup> The creation of an appointed committee, the regularization of maintenance, and the end of the private funding of aqueducts removed a great deal of the political glory to be had from improving the water supply. Claudius further

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adicit ipse aedilitatis suae commemoratione et ludos diebus undesexaginta factos et gratuita praebita balinea CLXX, quae nunc Romae ad infinitum auxere numerum.

<sup>294</sup> On the Republican procedure for water supply maintenance: Robinson 2003, 95-98. Publicani were likely still used for extremely large projects, such as building new aqueducts, as argued in Brunt 1980 and Thornton 1986.

<sup>295</sup> Frontinus *De Aquaeductu* 127 and 129.

<sup>296</sup> Frontinus *De Aquaeductu* 99-101.

depoliticized the office by adding the permanent, full-time position of *procurator aquarum*, which was filled by imperial freedmen until the Trajanic period.<sup>297</sup> The *procurator* inspected and authorized work done on the aqueducts and was therefore the ultimate authority behind the physical structures of the water supply. Because he was a freedman using public money, furthermore, there was no danger of his building a political following based on his public works.

Despite the existence of the office of the *curator aquarum*, later aqueducts and large renovation projects were attributed to the emperor in historical and epigraphic sources, suggesting that improvements to Rome's water system remained symbolically quite powerful, if now only for the reputational benefit of emperor himself.<sup>298</sup> Two further aqueducts, the Aqua Claudia and the Anio Novus, were built during the Julio-Claudian period. Caligula started construction on these aqueducts in 38 BCE because, according to Frontinus, Agrippa's system was already insufficient for the demand caused by public consumption and baths. Both of the new aqueducts were high-volume and technologically sophisticated; together, they nearly equaled the total volume of Augustus' water system.<sup>299</sup> Both would be completed under Claudius because Caligula was assassinated during their construction.<sup>300</sup>

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<sup>297</sup> Frontinus *De Aquaeductu* 105.

<sup>298</sup> For example, the inscriptions of Claudius, Trajan, Vespasian, and Titus on the Porta Praenestina (CIL VI.1256-1258) show the continued engagement of emperors with the Aqua Claudia and Anio Novus.

<sup>299</sup> Frontinus, *De Aquaeductu* 13.

<sup>300</sup> Suetonius, *Caligula* 21 and *Claudius* 20; Tacitus, *Annales* 11.13 (which suggests an earlier, though still Claudian, date for the Aqua Claudia); Pliny the Elder *NH* 36.122.

Nero did not build a new aqueduct, although his Arcus Caelimontani (or Neroniani) allowed distribution of the Claudia's waters to the Caelian and Aventine hills, replacing the branches of the Marcia and Julia that had previously supplied the area.<sup>301</sup> According to Frontinus, this reorganization ultimately had a negative effect on the water supply of the region. While there would have been sufficient water supplied by the Claudia when the system was working perfectly, any interruption to the Claudia, such as for repairs, meant that this densely populated part of the city went without public water.<sup>302</sup> An inscription of Vespasian on the Porta Maggiore, which brought the channels of the Claudia and the Anio Novus into the city, suggests that the Arcus Caelimontani could have had truly disastrous results for residents of the Caelian and Aventine hills:

The Emperor Caesar Vespasian Augustus, pontifex maximus, in his second year of the tribunician power, imperator six times, consul designate for the fourth time, father of his country, at his own expense restored for the city of Rome the Curtian and Caerulean waters that had been brought forth by the divine Claudius and subsequently had fallen into disrepair and had been interrupted for nine years.<sup>303</sup>

This inscription can be dated to 71 CE by Vespasian's titles. If the Claudia had indeed been out of service for nine years by then, it must have fallen into disrepair by 62 CE, a mere decade after its completion and right in the middle of Nero's reign. A notice of Tacitus regarding an attempt to diminish water piracy following the fire of 64 suggests that even if

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<sup>301</sup> Frontinus, *De Aquaeductu* 20, 76, 87; Evans 1994, 123.

<sup>302</sup> Frontinus, *De Aquaeductu* 87.

<sup>303</sup> CIL VI 1257: "Imp(erator) Caesar Vespasianus August(us) pontif(ex) max(imus), trib(unicia) pot(estate) II, imp(erator) VI, co(n)s(ul) desig(natus) IIII, p(ater) p(atriciae), | aquas Curtiam et Caeruleam perductas a divo Claudio et postea intermissas dilapsasque | per annos novem sua impensa urbi restituit." See also Evans 1994, 116.

all aqueducts were working throughout Nero's reign, their output would have been diminished – a possible contributing factor to the devastation of the fire.<sup>304</sup> Although there is no historical account of what might have happened to the Aqua Claudia, an anecdote of Tacitus shows Nero fouling another aqueduct, the Aqua Marcia, by swimming in its source. For committing such a sin against the people of Rome, Tacitus continues, the gods punished Nero with, notably, a serious illness.<sup>305</sup> Perhaps not coincidentally, the Aqua Marcia is the other aqueduct for which we have epigraphic evidence of a Vespasianic restoration, although this one was not completed until 77 CE.<sup>306</sup>

Read in light of Vespasian's inscription and Frontinus' criticism, Tacitus' anecdote suggests that Nero used neither the symbolic nor the actual political power of the aqueducts to his advantage. Vespasian's son and successor Titus, however, made sure to follow in his father's footsteps. An inscription of his dated to 80 CE, also from the Porta Maggiore, reads as follows.

The Emperor Titus Caesar Vespasian Augustus, son of the divine Vespasian, pontifex maximus, in his tenth year of the tribunician power, imperator for the seventeenth time, father of his country, censor, consul for the eighth time, saw to it that, at his own expense, the Curtian and Caerulean waters that had been brought forth by the divine Claudius and afterwards had been restored for the city of Rome by the divine Vespasian, his father, since they had fallen into disrepair at the source of the waters

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<sup>304</sup> Tacitus, *Annales* 15.43.

<sup>305</sup> Tacitus, *Annales* 14.22: "Isdem diebus nimia luxus cupido infamiam et periculum Neroni tulit, quia fontem aquae Marciae ad urbem deductae nando incesserat; videbaturque potus sacros et caerimoniam loci corpore loto polluisse. secutaque anceps valitudo iram deum adfirmavit."

<sup>306</sup> CIL VI 1246: "Imp(erator) Titus Caesar divi f(ilius) Vespasianus Aug(ustus), pontif(ex) max(imus) | tribuniciae potest(ate) IX, imp(erator) XV, cens(or), co(n)s(ul) VII, desig(natus) IIX, | rivom aquae Marciae vetustate dilapsum refecit | et aquam quae in usu esse desierat reduxit."

from the very foundation because of age, be brought back again but in a new channel.<sup>307</sup>

By monumentalizing his own investment in Rome's water system above and beyond the baseline upkeep provided by the *curator aquarum* in the same place as and in extremely similar language to Vespasian, Titus quite literally wrote himself into the histories of the Aqua Claudia and the Anio Novus.

In 111 CE, the emperor Trajan used strikingly similar language in the dedicatory inscription for his Aqua Traiana, the first completely new aqueduct to be brought to Rome since the Anio Novus.

The Emperor Caesar Nerva Trajan Augustus Germanicus Dacicus, son of the divine Nerva, pontifex maximus, in his thirteenth year of the tribunician power, imperator six times, consul five times, father of his country, brought the Aqua Traiana into Rome at his own expense, after buying a tract of land thirty feet wide.<sup>308</sup>

Because it describes the construction of an entirely new aqueduct rather than the renovation or completion of an existing one, Trajan's inscription recalls descriptions of the construction of republican-era conduits to an even greater extent than those of Vespasian and Titus. All three stress the fact that the emperors used their own money for their

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<sup>307</sup> CIL VI 1258: "Imp(erator) T(itus) Caesar divi f(ilius) Vespasianus Augustus pontifex maximus, tribunic(ia) | potestate X, imperator XVII, pater patriae, censor, co(n)s(ul) VIII | aquas Curtiam et Caeruleam perductas a divo Claudio et postea | a divo Vespasiano patre suo urbi restitutas, cum a capite aquarum a solo vetustate dilapsae essent, nova forma reducendas sua impensa curavit." Trans. Rebecca R. Benefiel.

<sup>308</sup> CIL VI 1260: "[Imp.] Caesa[r] | [divi] Nervae f(ilius) N[erva] | [T]raianus A[ug(ustus)] | Germ(anicus) Dacic(us), | [po]nt(ifex) max(imus), tr(ibunicia) pot(estate) XIII, | imp(erator) VI, co(n)s(ul) V, p(ater) p(atriciae), | aquam Traianam | pecunia sua | in urbem perduxit | emptis locis | per latitud(inem) p(edum) XXX"

projects, but Trajan makes sure to mention that he also purchased the land on which the aqueduct would be built.

An inscription of Caracalla regarding his restoration of the Aqua Marcia certainly falls within the tradition of those of earlier emperors, but is remarkably different in tone.

The Emperor Marcus Aurelius Antoninus Pius Felix Augustus (Caracalla), Parthicus Maximus, Britannicus Maximus, pontifex maximus, restored the aqua Marcia, since it had been disrupted by various problems. He cleaned up its source, cut through and pierced mountains, restored its channel, and even added a new 'Antoninian' source, and he saw to it that the aqua Marcia was restored to his sacred city.<sup>309</sup>

One obvious difference from the previous inscriptions is the lack of any mention of the aqueduct's funding, which combined with the heroic — almost poetic — language and the relative lack of political titles in the emperor's name contributes to making the inscription little resemble narratives of aqueduct construction from either the Republican or the earlier imperial period.

## II. Aqueducts outside Rome

Roman emperors did on occasion fund, in whole or in part, aqueducts around the empire. Hadrian was especially prolific in this regard: inscriptions spanning the empire from Italica in Spain to Antioch in Syria acknowledge this emperor's financial contribution to local water systems.<sup>310</sup> These cases seem, however, to have been extraordinary shows of

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<sup>309</sup> CIL VI 1245: "Imp. Caes(ar) M. Aurelius Antoninus Pius Felix Aug(ustus) Parth(icus) Max(imus) | Brit(annicus) Maximus, pontifex maximus, | aquam Marciam variis kasibus impeditam purgato fonte excisis et perforatis | montibus restituta forma adquisito etiam fonte novo Antoniniano | in sacram urbem suam perducendam curavit."

<sup>310</sup> Gabii (CIL 14.2797), Cingulum (CIL 9.5681), Dyrr(h)achium (CIL 3.709), Sarmizegetusa (CIL 3.1446), (SEG 32.460), Corinth (Paus. 2.3.5, 8.22.3), Athens (CIL 3.549 = ILS 337),



munificence tied to an imperial visit or special recognition of a city, akin to the imperial restorations of temples. As a rule, cities outside Rome were responsible for building and maintaining their own water management systems. In this section, I examine four cases of imperial involvement in provincial water infrastructure that illustrate the degree to which two emperors, Trajan and Hadrian, seem to have been involved with such projects in normal circumstances.

*a. Aqueducts in the correspondence of Pliny the Younger*

One of the most fertile bodies of evidence for Roman provincial administration, and for conceptions of the duties of government during the High Empire more generally, are the letters written and received by Pliny the Younger during the time he served as the governor of Bithynia and Pontus from 111 to 113 CE. Two pairs of letters are of particular interest for the present chapter.<sup>311</sup> Each consists of a request from Pliny regarding water management in a specific city of the province and a corresponding response from Trajan. Pliny repeatedly invokes the importance of these projects to the health of Roman provincial subjects as justification for the expense, and in each case Trajan agrees that the work must be done.

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Coronea in Boeotia (SEG 32.460), Caesarea in Judaea (AE 1928,136), and Antioch in Syria (Malal. Chron. 11.14 = 277.20-278.19 Dindorf).

<sup>311</sup> A third pair, *Ep.* 10.98-99, which concerns the covering of a pestilential ditch in the city of Amastris, is also of great interest for public health questions.

*i. Nicomedia (letters 10.37-8)*<sup>312</sup>

To the Emperor Trajan:

The citizens of Nicomedia have expended three million, three hundred and twenty-nine sesterces in building an aqueduct; but, not being able to finish it, the works are entirely falling to ruin. They made a second attempt in another place, where they laid out two millions. But this likewise is discontinued; so that, after having been at an immense charge to no purpose, they must still be at further expense in order to be accommodated with water. I have examined a fine spring from which the water may be conveyed over arches (as was attempted in their first design) in such a manner that the higher as well as level and low parts of the city may be supplied. There are still remaining a very few of the old arches; and the square stones, moreover, employed in the former building, may be used in turning the new arches. I am of opinion that part should be constructed in brick, as that will be the easier and cheaper material. But in order that this work may not meet with the same ill success as the former, it will be necessary to send here an architect, or someone skilled in the construction of this kind of waterworks. And I will venture to say, from the beauty and usefulness of the design, it will be an erection well worth the splendor of your times.

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<sup>312</sup> Translations adapted from those by William Melmoth. Pliny the Elder, *Ep.* 10.37: "C. PLINIUS TRAIANO IMPERATORI. 1 In aquae ductum, domine, Nicomedenses impenderunt HS XXX CCCXVIII, qui imperfectus adhuc omissus, destructus etiam est; rursus in alium ductum erogata sunt CC. Hoc quoque relicto novo impendio est opus, ut aquam habeant, qui tantam pecuniam male perdiderunt. 2 Ipse perveni ad fontem purissimum, ex quo videtur aqua debere perducī, sicut initio temptatum erat, arcuato opere, ne tantum ad plana civitatis et humilia perveniat. Manent adhuc paucissimi arcus: possunt et erigi quidam lapide quadrato, qui ex superiore opere detractus est; aliqua pars, ut mihi videtur, testaceo opere agenda erit, id enim et facilius et vilius. 3 Sed in primis necessarium est mitti a te vel aquilegem vel architectum, ne rursus eveniat quod accidit. Ego illud unum affirmo, et utilitatem operis et pulchritudinem saeculo tuo esse dignissimam.

Pliny the Elder, *Ep.* 10.38: TRAIANUS PLINIO. Curandum est, ut aqua in Nicomedensem civitatem perducatur. Vere credo te ea, qua debebis, diligentia hoc opus aggressurum. Sed medius fidius ad eandem diligentiam tuam pertinet inquirere, quorum vitio ad hoc tempus tantam pecuniam Nicomedenses perdiderint, ne, dum inter se gratificantur, et incohaverint aquae ductus et reliquerint. Quid itaque compereris, perfer in notitiam meam."

Trajan to Pliny:

Care must be taken to supply the city of Nicomedia with water; and that business, I am well persuaded, you will perform with all the diligence you ought. But really it is no less incumbent upon you to examine by whose misconduct it has happened that such large sums have been thrown away upon this, lest they apply the money to private purposes, and the aqueduct in question, like the preceding, should be begun, and afterwards left unfinished. You will let me know the result of your inquiry.

Of the two pairs of letters discussed here, this first one is in some ways less directly connected to aqueducts *per se*. Rather, the major issue Trajan focuses on in his response seems to have been the possible misuse of civic funds by an important city under Roman imperial control.<sup>313</sup> That the funds had been earmarked for the construction of an aqueduct seems to have been incidental from the emperor's perspective.

Still, the exchange preserves several important pieces of information about the level of involvement Roman governors and emperors could have in provincial water infrastructures. First, Pliny is remarkably well versed in the technical aspects of the aqueduct's construction. He claims to have personally examined and approved the source, and expresses what seems to be an informed opinion on the merits of brick over stone construction for the conduit. Additionally, Pliny suggests that an Italian expert be sent to Nicomedia to oversee construction in order to ensure that no further time or money is wasted. On the other side of the Roman Empire, in the western provinces, the use of the characteristically Italian masonry style of *opus reticulatum* suggests that this might have

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<sup>313</sup> Campbell 2012, 242.

been a relatively common practice when a local community lacked engineers with the technical knowledge to direct such massive public works.<sup>314</sup>

*ii. Sinope (letters 10.90-91)*<sup>315</sup>

To the Emperor Trajan:

The inhabitants of Sinope are ill supplied with water, which, however, may be brought thither from about sixteen miles' distance in great plenty and perfection. The ground, indeed, near the source of this spring is, for rather over a mile, of a very suspicious and marshy nature; but I have directed an examination to be made (which will be effected at a small expense) whether it is sufficiently firm to support any superstructure. I have taken care to provide a sufficient fund for this purpose, if you should approve, Sir, of a work so conducive to the health and enjoyment of this colony, which is greatly distressed by a scarcity of water.

Trajan to Pliny:

I would have you proceed, my dearest Secundus, in carefully examining whether the ground you suspect is firm enough to support an aqueduct. For I have no manner of doubt that the Sinopian colony ought to be supplied with water; provided their finances will bear the expense of a work so conducive to their health and pleasure.

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<sup>314</sup> Wilson 1996, 18-19.

<sup>315</sup> Pliny the Elder, *Ep.* 10.90. C. PLINIUS TRAIANO IMPERATORI: 1 Sinopenses, domine, aqua deficiuntur; quae videtur et bona et copiosa ab sexto decimo miliario posse perduci. Est tamen statim ab capite paulo amplius passus mille locus suspectus et mollis, quem ego interim explorari modico impendio iussi, an recipere et sustinere opus possit. 2 Pecunia curantibus nobis contracta non deerit, si tu, domine, hoc genus operis et salubritati et amoenitati valde sitientis coloniae indulseris.

Pliny the Elder, *Ep.* 10.91: TRAIANUS PLINIO. Ut coepisti, Secunde carissime, explora diligenter, an locus ille quem suspectum habes sustinere opus aquae ductus possit. Neque dubitandum puto, quin aqua perducenda sit in coloniam Sinopensem, si modo et viribus suis assequi potest, cum plurimum ea res et salubritati et voluptati eius collatura sit.

In this exchange, unlike the previous one, the possibility of graft or mismanagement was not a concern. Trajan's response does suggest that the emperor hoped to avoid using imperial money on a local aqueduct, which raises the question of why Pliny thought the emperor needed to be involved in this matter at all. Was this a question of Pliny's management of civic funds and his own time? As above, Pliny again seems to have been intimately involved with the technical aspects of the construction of the aqueduct, including a thorough inspection of the water source and the land the aqueduct would have to cover.

Especially notable in this exchange is the vocabulary used by Pliny and Trajan to justify the importance of the proposed aqueduct. While both invoke the same two basic virtues, health (*salubritas*) and pleasure, each uses a different word for the latter: *amoenitas* for Pliny and *voluptas* for Trajan. The slight difference in terminology here shows that Trajan was not simply quoting Pliny's letter in his response, suggesting an internal administrative position on the value of aqueducts that was familiar to both.

Overall, the language employed in both pairs of letters is useful for fleshing out our understanding how Romans in the highest level of government understood their responsibility for provincial water infrastructures and urban sanitation more generally. While the letters show a reticence on the part of the Roman administration to become financially involved in such projects, both Pliny and Trajan consistently afford them a high ideological value. Crucially, Pliny's requests and Trajan's responses show that collective health was, at least at this moment in Roman history, a reasonable, valid, and sufficient justification for expending civic funds on expensive public works projects.

*b. Hadrian's letter to Aphrodisias*

Although a body of correspondence minutely detailing the work of provincial administration at the highest level comparable to the letters of Pliny the Younger and Trajan does not exist for any other emperor, a letter from Hadrian to the people of Aphrodisias, preserved and monumentalized in the form of a marble inscription, is evidence that Trajan's successor was similarly called upon to approve the use of civic funds for aqueducts in provincial cities. Found in 1994 near the monumental center of the city, the inscription was carved in the famous local marble and showed signs of having been originally affixed to a wall.<sup>316</sup> The slab may have been part of a larger series of imperial letters, and its contents consist of four separate letters written by Hadrian to the city over a span of six years (119 CE to 125 CE).

Two of these letters, the third and the fourth, make mention of the aqueduct, but the fourth letter is too fragmentary to permit reconstruction.<sup>317</sup> The more complete letter concerning the aqueduct is the third on the slab, and is dated to the last year of this range. Reynolds translates the letter as follows.

In (the *stephanephorate* of) Claudius Hypsicles, *heros*. The emperor Hadrian (all titles given) greets the magistrates, the Council and the People of Aphrodisias. The funds which you have reserved for the aqueduct I confirm. And since there are certain of your citizens who say that they have been nominated for the high priesthood when they are incapable of undertaking it, I have referred them to you to examine whether they are able to undertake the liturgy and are evading it, or are telling the truth; if, however, some of them were to appear to be better off, it is fair that they should hold the high priesthood first. I concede that you should take

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<sup>316</sup> Reynolds and Souris, 2000.

<sup>317</sup> Reynolds suggests that the fourth letter, which is actually dated to the previous year, had provided background on the more complete third letter, and perhaps concerned the original proposal to reorganize Aphrodisias' budget. Reynolds and Souris 2000, 20.

money from the high priests instead of the gladiator shows; not only do I concede but I praise your proposal. The supervisors who will be chosen by you for the water-channel will be able to get advice and help on those matters on which they need them from my procurator Pompeius Severus, to whom I have written. Farewell.

The subject of the letter abruptly switches from an aqueduct to a scandal concerning the evasion of religious duties, then to gladiators and back to the aqueduct. Reynolds reads these seemingly diverse topics as part of the same essential problem. According to her interpretation, the civic government of Aphrodisias, having trouble assembling the funds necessary to build, repair, or expand an aqueduct, had sent a full budgetary report to the emperor. This report must have mentioned the administration's trouble replacing retiring priests, and also suggested the possibility of diverting funds intended for gladiatorial shows toward the aqueduct project.

While the precise relationship between the high priesthood (which Reynolds identifies as that of the imperial cult) and the civic treasury is unclear, Hadrian clearly connects the city's difficulty finding eligible candidates to its financial problems. Campanile suggests that Hadrian's objection to repurposing the gladiatorial funds is likely to be found in the importance of gladiatorial shows to the imperial cult itself.<sup>318</sup> More recently, Coleman has offered an intriguing alternative explanation: that it was specifically the duty of paying for gladiatorial shows as part of the imperial priesthood to which the delinquent potential high priests objected.<sup>319</sup> According to this interpretation, the aqueduct project was actually proposed as an alternative in order to convince the city's leading men to

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<sup>318</sup> Campanile 2001, 136-138.

<sup>319</sup> Coleman 2008.

accept the duty of priesthood, a reading that presupposes that aqueducts in second-century CE Asia Minor were considered significantly more politically valuable in a local context than were gladiatorial games. In light of such an interpretation, Hadrian's response can be understood as an order to prioritize a public ritual important to the imperial cult over the local water needs of Aphrodisias.

Whatever the precise story behind Aphrodisias's finances, this letter, like the correspondence between Pliny and Trajan regarding Sinope, shows that financial and technical complications in the everyday construction of aqueducts by provincial civic governments could, in certain cases, be brought to the attention of the emperor himself. In neither case does the emperor offer to solve the city's problem by means of providing the necessary money. Instead, the emperor advises the city on how to find the funds within its own budget. As also in the case of Sinope, the Aphrodisias letter suggests that the emperor additionally provided help in the form of technical or organizational assistance from Italian experts – here, Hadrian offers the advisory services of his procurator Pompeius Severus.<sup>320</sup> It should be kept in mind, however, that Pliny's correspondence and the Aphrodisias letters date relatively close in time—between 113 and 125—and both come from the eastern part of the Empire, a region in which both Trajan and Hadrian took special interest. As such, we cannot extrapolate their concessions to the rest of the empire or the rest of Roman history.

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<sup>320</sup> Hadrian also mentions Pompeius Severus in a letter to the city of Stratonicea dated to 127 C.E., in the context of the restoration of some important buildings (Dittenberger no.837 = FIRA vol. I, no. 80).



### III. Conclusions

In many ways, aqueducts were unique among types of collective action regarding health in the ancient world. Both in and outside the city of Rome, they required a great deal of upfront financial investment, sophisticated technological knowledge, and the organization of labor. Unlike wells and cisterns, as Hodge notes, "aqueducts were, and had to be, a public and collective enterprise."<sup>321</sup> While certain technical aspects of aqueduct construction did advance during the Roman period, the questions of providing finances, attracting experts, and organizing labor were constant throughout antiquity, starting from the time when Polykrates, tyrant of Samos, directed the construction of the so-called Tunnel of Eupalinos in the sixth century BCE. What did change over time was the political significance of meeting those requirements. The transition from the Roman Republic to the Principate gave rise to especially radical changes in this arena: aqueduct construction within the city of Rome was definitively cut off from senatorial political ambition.

Another unchanging feature of aqueducts, their need for constant maintenance in order to remain operational, also manifested differently in different Roman political contexts, both chronologically and depending on whether the aqueducts were located in the capital or elsewhere in the empire. The unglamorous task of arranging the cleaning and repairing of aqueduct channels also required substantial money, expertise, and labor, but unlike constructing a new aqueduct it offered no opportunity to advance the organizer's political standing. This seems to be why Q. Marcius Rex made sure to attach his name to a new conduit even though he had been commissioned by the Senate merely to repair the

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<sup>321</sup> Hodge 2002, 49.

three already extant ones.<sup>322</sup> Augustus's creation of the office of the curator aquarum obviated the need for such a political carrot, and at the same time asserted the authority of the imperial administration, in the person of a curator appointed by the emperor himself, over each of Rome's aqueducts. The older conduits may still have borne their Republican names, but the responsibility — and credit — for the capital's entire water system now belonged to the emperor. At this point, maintenance was elevated from an occasional emergency measure to a constant and permanent duty of Rome's civic administration.

It is intriguing that something so clearly important to the imperial administration within the city of Rome was managed so inconsistently elsewhere in the empire. Pliny the Younger's correspondence with Trajan and Hadrian's letter to Aphrodisias do suggest a certain Roman ownership over the concept of state-of-the-art aqueducts that found its full expression in the occasional whole-cloth construction of aqueducts in the provinces as a show of imperial munificence, at least in the Greek east during the early second century. They also, however, show that as a rule the imperial administration acted as if the ultimate responsibility for water infrastructure was above all a civic or local matter, with higher authorities becoming involved only in exceptional cases and then only in a limited way. When the Roman imperial state did pay for provincial aqueducts, it did so in an *ad hoc* way reminiscent of the Republican period within Rome, and does not seem to have made provision for their future maintenance. The change in the political significance of aqueduct construction and maintenance in Rome that we see under Augustus seems to have been particular to the capital only. In other words, it seems to have been closely tied to the

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<sup>322</sup> Pliny the Elder, *NH* 36.121: "iussus a senatu aquarum Appiae, Anienis, Tepulae ductus reficere."

emperor's personal, intimate relationship with the physical infrastructure, and the residents of, the city of Rome.

## Medical Authority and the Roman State

In 23 BCE, after falling seriously ill and being cured by his physician Antonius Musa through cold baths and dietary changes, Augustus dramatically expanded the state's encouragement of Greek medicine by granting unprecedented honors to Musa as well as tax immunity to all physicians in perpetuity:

For this (*i.e. healing Augustus*), Musa received a great deal of money from both Augustus and the senate, as well as the right to wear gold rings (for he was a freedman), and he was granted exemption from taxes, both for himself and for the members of his profession, not only those living at the time but also those of future generations.<sup>323</sup>

From this point on, practicing doctors across the empire enjoyed special privileges that were periodically renewed, notably by Vespasian, Hadrian, and Constantine.<sup>324</sup> One common explanation for this significant change in relationship between physicians and the state is the increased need for military doctors at the peripheries of the Empire.<sup>325</sup> While a great deal of the hard evidence for the medical profession in the Roman world is indeed of a military nature, this by no means precludes a more general shift in the understanding and treatment of physicians by the Roman state that included all Roman citizens, not just soldiers. Indeed, textual sources reveal a number of ways in which members of the Julio-Claudian dynasty actively fostered a redefinition of the role of the physician in relation to

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<sup>323</sup> Cassius Dio, *History* 53.30, see also Pliny *NH* 29.5.7

<sup>324</sup> Vespasian and Hadrian: Charisius, Dig. 50.4.18.30. See generally Nutton 1988.

<sup>325</sup> Weaknesses of this explanation are further discussed below in Chapter 5.

the state itself that was not limited to the military sphere. Instead of being a purely tactical decision meant to strengthen Rome's military presence at the borders, I argue that the new position of physicians had a strong ideological component that reflected new ideas about the relationships between and among the imperial administration, the empire, and the individual Roman citizen.

As discussed in Chapter 2, certain epidemic diseases could, in extreme cases and in certain political climates, fall under the purview of the Roman state. In such cases, the Senate, or the citizen body at the direction of the Senate, would perform religious rituals for the benefit of certain gods, usually gods with a close and traditional connection to the Roman state. These portent-epidemics were by their very nature exceptional. The majority of physical ailments in the ancient world, and especially those that did not affect a large number of people at the same time, were not treated as divine punishment at the state level. While the majority of health issues were not matters of state in the way that epidemics were, the Roman government did engage with medical authorities both human and divine in many ways that evolved over the period of time considered here. This chapter draws on a wide variety of evidence to trace developments in Roman state interactions with such authorities, including the legal status of professional physicians, the relationships of certain individual physicians with officials at the highest levels of Roman government, and the Roman state's use of intrinsically health- and healing-related language and iconography in self-representation.

## I. Human and divine medical authority in the Roman world

While I discuss them separately within this chapter, I include both professional physicians and the quintessential Greco-Roman healing deity, Asclepius, in the category of ancient medical authorities for the simple reason that Romans did not place them in opposition to each other. Instead, Romans considered them more like partners. In their histories of the medical arts, both Celsus and Pliny the Elder narrate the same basic origin: professional medicine was founded by Asclepius himself, and later refined and popularized by Hippocrates of Cos. Both accounts also take note of the divinization of Asclepius, with Pliny's use of the plural *inventores* suggesting, intriguingly, that other medical pioneers had been divinized as well.<sup>326</sup>

While Pliny and Celsus do not suggest anything deeper than an intellectual link between Asclepius and Hippocrates, the prose hymn to Asclepius preserved by Aelius Aristides in *Or.* 38 makes the more extreme claim that Hippocrates and other highly skilled earthly physicians were in fact direct descendants of the god by way of his sons Machaon and Podalirius, who are described as having scattered "seeds" around the world like Triptolemus or Heracles.

And even if Hippocrates alone of their descendants had arisen to be the heir to their skill, and all those between had been mere laymen, that would still have been a crop sufficient for the earth, and men would have been grateful to them for the sowing; but in fact, the family of the Asclepiadae has been made as it were a nation which

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<sup>326</sup> Celsus, *De medicina* Proemium 2: "Ut pote cum vetustissimus auctor Aesculapius celebretur, qui quoniam adhuc rudem et vulgarem hanc scientiam paulo subtilius excoluit, in deorum numerum receptus est."

Pliny *NH* 29.1.3: "Dis primum inventores suos adsignavit et caelo dicavit. Nec non et hodie multifariam ab oraculis medicina petitur."

preserves the art through the line of blood; so well did divine destiny guide Machaon and Podalirius in their begetting of children.<sup>327</sup>

We do not know to what degree Romans believed in a literal blood relationship between medical practitioners and Asclepius, but it is obvious that physicians around the Roman world were eager to associate themselves with the god. The (perhaps assumed) name of the famous Methodist Asclepiades of Bithynia must come out of the same tradition described in the prose hymn above. Though a lifelong critic of the Methodists, Galen also claimed an intimate relationship with Asclepius that spanned the course of his medical training and career, often taking the form of dream visitations. Famously, Galen convinced the emperors Marcus Aurelius and Lucius Verus, in whose service he was at the time, to allow him to return to his hometown of Pergamum when the Antonine Plague reached Italy by citing one such dream as proof that Asclepius himself wanted him to leave.<sup>328</sup>

Physicians of less renown, too, presented themselves as having a special connection with Asclepius and with the divine realm more generally. A marble relief of very high quality, dated roughly to the time of Augustus and now at the Staatliche Museen zu Berlin, shows a seated man in the dress of a citizen receiving a line of supplicants before an altar (Fig.4.1).<sup>329</sup> The man has been identified as a physician due to a case of medical instruments carved into the field of the relief, and also due to a large serpent wound around a tree in the background. The serpent, a classic symbol and avatar of Asclepius, faces the physician with its mouth open, as if speaking directly to him. Because of the

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<sup>327</sup> Aelius Aristides, *Or.* 38.16; Russell et al 2016, 56n37.

<sup>328</sup> Galen, *De libris propriis* 19

<sup>329</sup> Antikensammlung der Staatlichen Museen zu Berlin, Ident.Nr. SK 804

relief's lack of inscription and provenance, it is unclear whether it was the physician's grave marker or a votive relief; the presence of a horse and the physician's large size compared to the other figures have led some to suggest that the physician may have been worshipped as a hero after his death, much like Asclepius himself.<sup>330</sup>

A physician's grave stele recently found in Kelli, Greece and roughly dated between the mid-second and early third centuries CE (Fig. 4.2), though much more crudely carved, shares the same iconography that identifies the figure in the Berlin plaque as a physician. Of the two panels on the stele, the lower one is a traditional row of family portraits. The upper register, however, shows four figures in an interior scene that is clearly identifiable as a medical workshop. A set of medical tools, some of which are arranged in a box as in the Berlin relief, is depicted above the table in the center. Under the table, between the two large figures in the scene, is a coiled serpent. Remarkably, the largest figure in the scene, whom Moschakis identifies as the deceased physician in whose honor the stele was made, is female – perhaps a member of a family of physicians.<sup>331</sup> If so, this stele may be a rare example of a woman associating herself with a symbol of Asclepius. While female physicians are attested in the Classical world,<sup>332</sup> the health-related profession that drew the most women was undoubtedly that of midwife. The iconography of Asclepius does not appear in any images of Roman midwives of which I am aware, suggesting that the god was

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<sup>330</sup> Krug 2008.

<sup>331</sup> Karamitrou-Mentesidi and Moschakis 2014, 8-19.

<sup>332</sup> While the cross-dressing physician Agnodice of Athens (Hyginus, *Fabulae*) was likely a legendary figure, a number of funerary inscriptions from around the Roman world identify real women as *medicae*: e.g, CIL II.497 = ILS 7802 and CIL II.4380 from Hispania, CIL XII.3343 from Gallia Narbonensis, CIL XIII.2019 from Lugdunum, and CIL XIII.4334 from Gallia Belgica.



associated specifically with the practitioners who considered themselves *iatroi/medici*, and not all providers of healthcare.

In sum, professional physicians were by no means in opposition to the kind of supernatural healing associated with Asclepius, and in fact seemed to have understood their own profession as a worldly extension of the healing god's power. In this chapter, I contend that the Roman state also made no distinction between the human and divine sides of traditional Greek medicine. What seems to have mattered more was the position of the state itself toward Greek medicine at different points in time, something that was largely dependent on political circumstance. Due to the potentially threatening foreignness of both professional medicine and Asclepius himself, both were held at a distance by the Roman government (though not necessarily by the Roman people) during the Republic. As the emperors of the Principate sought to integrate and exploit the entirety of the growing empire, however, they began to explicitly associate themselves with and endorse both human doctors and Greek healing deities.

## **II. Physicians and the Roman state**

### *a. Professional physicians in the Republican period*

In the middle of the diatribe against Greek doctors that starts off Book 29 of the *Historia naturalis*, the first century BCE encyclopedist Pliny the Elder offers a short anecdote that reveals that the Republican senate did attempt to take a more proactive role in population health than described in Chapter 2 on at least one occasion:

Cassius Hemina, one of our earliest authorities, asserts that the first physician to come to Rome was Archagathus, son of Lysanias, who migrated from the Peloponnesus in the year of the city 535 [219 BCE], when Lucius Aemilius and M.

Livius were consuls. He adds that citizen rights were given him, and a surgery (*tabernam*) at the crossroads of Acilius was bought with public money for his own use.<sup>333</sup>

Archagathus was certainly not the first doctor at Rome, although Pliny may have believed he was.<sup>334</sup> In reality, Archagathus appears to have been the first *public* doctor in the city. By recruiting and financially supporting a Greek doctor, the Roman senate followed the lead of many Hellenistic cities. In the Greek east, the profession of medicine had a long heritage that had officially started in the late fifth century BCE with the famous physician Hippocrates of Cos. Though Greek cities may have hired public doctors from an early date, inscriptions from all over the eastern Mediterranean attest to an explosion of the practice in the Hellenistic period.<sup>335</sup>

We unfortunately do not know the circumstances that led the senate to invite Archagathus to Rome, although we have seen that the senate was willing to experiment in the face of serious epidemics. The surviving books of Livy only start up again in 218 BCE, a year after Archagathus' arrival, and the *Periochae* make no mention either of Archagathus or of an epidemic that might have inspired his invitation. We might expect that an epidemic severe enough to be considered a prodigy would be included in the *Liber prodigiorum* of

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<sup>333</sup> Pliny *NH* 29.6.12: "Cassius Hemina ex antiquissimis auctor est primum e medicis venisse Romam Peloponneso Archagathum Lysaniae filium L. Aemilio M. Livio cos. anno urbis DXXXV, eique ius Quiritum datum et tabernam in compito Acilio emptam ob id publice."

<sup>334</sup> There are various appearances of physicians in literary sources discussing earlier periods (e.g. Dionysius of Halicarnassus *Antiquitates* 10.53.1, Ovid *Met.*, 15.13, Val. Max. 2.4.5); more definitive are the provision in a fourth century BCE *Lex aquilia* that concerns the malpractice of physicians and the existence of the word *medicus* in the works of Plautus: *Amphitryo* refers to "medicinis" (doctors' offices) as if there were several in the center of Rome. See Nutton 1993.

<sup>335</sup> Nutton 2013, 154 summarizes the epigraphic evidence for public doctors.

Julius Obsequens, a fourth century CE epitomizer of portents in Livy, but the work does not survive in full and the surviving fragment starts in 190 BCE. Polybius covers this period in Book 3 of his *Histories*, but mentions no epidemic in Rome. It is possible that there was no precipitating event and that the senate chose to invite Archagathus for another reason, such as the simple desire to imitate Hellenistic urban sophistication.

Whatever the senate's reason for recruiting and importing a public doctor, the experiment quickly ended:

They say he was a wound specialist, and that his arrival at first was wonderfully popular, but presently from his savage use of the knife and cautery he was nicknamed "carnifex," and his profession, with all physicians, became objects of loathing.<sup>336</sup>

Pliny clearly exaggerates the universality of the bad reputation of physicians here. While Cato the Elder, a younger contemporary of Archagathus, did engage in paranoid denunciations of foreign doctors, other elite Romans of the period gladly recruited (or bought) their own Greek physicians.<sup>337</sup> What actually seems to have resulted from Archagathus' public relations disaster was simply that the Roman state ceased to endorse and financially support one particular physician charged with treating the *populus* rather than an individual, thereby ending the short-lived office of public physician of Rome.

Although Greek medicine officially returned to being a private business, if an increasingly popular one, there is evidence from the late Republic to suggest that some elite

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<sup>336</sup> Pliny 29.6.13: "vulnerarium eum fuisse egregium, mireque gratum adventum eius initio, mox a saevitia secandi urendique transisse nomen in carnificem et in taedium artem omnesque medicos."

<sup>337</sup> Cn. Octavius, consul in 165 BCE, employed a doctor named Athenagoras of Larisa; A. Postumius Albinus employed one named Ammonius in the 140s (Nutton 2004, 164).

Romans may have remembered the Archagathus affair more fondly. The first is a 49 BCE coin of Manius Acilius Glabrio, a member of the family that was the namesake of the Acilian crossroad, where Archagathus' office was located (Fig.4.3).<sup>338</sup> While Mommsen speculated that Archagathus himself had been the founder of the Acilian gens, something he managed by changing his name and assimilating into the Roman aristocracy, it seems far more likely that the Hellenophile Acilii were simply friends of the Greek doctor. In any case, a century and a half after the affair, Manius Acilius Glabrio minted a denarius with Salus on the obverse and the minor Latin healing deity Valetudo on the reverse, a possible celebration of his ancestors' ties to Greek medicine.

*b. Professional physicians in the Principate*

While the Archagathus episode of 219 BCE was characteristic of the Republican senate's difficult relationship with Greek medicine, under Augustus physicians made substantial financial and social gains. Upper-class Romans had long employed Greek physicians privately, but it was not until the Republic fell that they were recognized as a special and desired class of tradesmen by the Roman government. Julius Caesar began this process when he gave doctors (as well as teachers) practicing within the city of Rome citizenship "to make them more desirous of living in the city and to induce others to resort to the profession."<sup>339</sup> Two decades after Caesar's grant of citizenship made doctors practicing in Rome full participants in the Roman state, Augustus's tax immunity singled them out as a protected and honored class of tradesmen. In addition to this extraordinary legal

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<sup>338</sup> RRC 442/1a.

<sup>339</sup> Suetonius, *Divus Iulius*, 42.

recognition that affected Roman doctors collectively, Augustus and the citizen body as a whole undertook special actions to honor Antonius Musa himself and his successful cure of the emperor. Suetonius provides further details:

In honour of his physician, Antonius Musa, through whose care he had recovered from a dangerous illness, a sum of money was raised and Musa's statue was set up beside that of Aesculapius. Some householders provided in their wills that their heirs should drive victims to the Capitol and pay a thank-offering in their behalf, because Augustus had survived them, and that a placard to this effect should be carried before them.<sup>340</sup>

Erecting a statue of a living person was an early Republican taboo that had long been defunct, but until the first century BCE it was a relatively rare practice that represented considerable honor for the subject of the statue.<sup>341</sup> A statue of Cato the Elder had been erected in the Temple of Salus following his censorship of 184 BCE.<sup>342</sup> In the later Republic, statues were erected in the likeness of prominent generals and dictators: Marius, Sulla, Pompey, and Julius Caesar all had statues of themselves erected while they were still

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<sup>340</sup> Suetonius, *Augustus* 59: "Medico Antonio Musae, cuius opera ex ancipiti morbo convaluerat, statuam aere conlato iuxta signum Aesculapii statuerunt. Nonnulli patrum familiarum testamento caverunt, ut ab heredibus suis praelato titulo victumae in Capitolium ducerentur votumque pro se solveretur, quod superstitem Augustum reliquissent."

<sup>341</sup> Weinstock 1971, 40 on the history of statues of living Romans, and an elaboration on Caesar's statue on the Capitoline, erected following the Battle of Thapsos. Saviors of the state such as Q. Fabius Maximus and Scipio Africanus are the archetypal recipients. Dio's claim that "any who wished were free to have their likenesses appear in public in a painting or in bronze or marble" (60.25.2) during the time of Claudius must describe a development of the Principate, though see Tanner 2000.

<sup>342</sup> Plutarch, *Cato Maior*, 19. The inscription on the statue proclaimed that "when the Roman state was tottering to its fall, he was made censor, and by helpful guidance, wise restraints, and sound teachings, restored it again."

living.<sup>343</sup> Set against this context, Antonius Musa's statue is remarkable in several ways. First, Musa was not a dictator, general, senator, or even ethnically a Roman, but instead a Greek-born freedman. Second, the reason he received this honor was not because he had performed a deed that affected the *populus* in a direct sense – that is, he did not win a battle or save the state from financial ruin. Rather, in the new political reality of the Principate, even an illness that affected only one person could become an existential threat to the entire *res publica*, as long as that person was the emperor or another important member of the imperial family.

The location of Musa's statue in the temple of Aesculapius is also worth commenting upon. While erecting statues of famous generals in public places had become relatively commonplace in Rome, temples were highly unusual locations for such practice. Cato's statue in the Temple of Salus, mentioned above, and a statue set up by Mn. Acilius Glabrio in the Temple of Pietas in honor of his father in 181 BCE are the exceptions that prove the rule.<sup>344</sup> In both of these cases, the honorees were not equated with the deities and were not themselves worshipped. In the late Republic, however, erecting a statue of a living man inside a temple took on the connotation of the *sunnaos theos*, largely an influence of the tradition of the worship of Roman generals in this way in the East that dates from the early second century BCE.<sup>345</sup> The most notorious example of this practice within Rome at the

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<sup>343</sup> Plut. *Caes.* 6.1, Vell. 2.43.4, Val. Max., 6.9.14, Suet. *Caes.* 11, Dio 42.18.2 and 43.49.1, also see Weinstock 1971, 186.

<sup>344</sup> On erecting statues in Roman temples, see Weinstock 1971, 186. Glabrio: Livy 40.34.5; Val. Max. 2.5.1.

<sup>345</sup> Weinstock 1971, 186. Marcellus and Flamininus were perhaps the first Romans to receive this treatment in the east: Plutarch *Marcellus* 30.7; Tanner 2000, 40.

time would be Julius Caesar's erection of a statue of himself, inscribed "Deo Invicto," in the Temple of Quirinus in the spring of 45 BCE.<sup>346</sup> There is no evidence that Musa was ever worshipped as a deity, and so it is likely that the erection of the statue was intended merely as an honor as in the case of Cato. Still, the practice of placing a living man's statue next to a god's was rare enough that the implications of Caesar's example should not be entirely discounted.

Potential connotations of divinization aside, Musa's cure of Augustus won both him and his treatments a great reputation. Horace describes the extreme popularity of the cold water treatment, as opposed to the previously popularity of hot spring water, in a poem published in 21 BCE.<sup>347</sup>

Since I'm prescribed cold baths in winter, Antonius Musa makes visiting Baiae pointless, yet ensures I'm frowned on there. Of course the town sighs. Its myrtles are being abandoned, its sulphur baths scorned that rid the sinews of lingering disorders, indignant at patients who dare to subject head and stomach to Clusium's springs, or make for Gabii's cold fields. I've to change my resort, and spur my horse past familiar inns. 'Whoa, I'm not heading for Cumae or Baiae,' cries the rider, testily giving the left reign a tug: but the horse only hears the bit.<sup>348</sup>

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<sup>346</sup> Dio 43.45.3; Cicero *Att.* 12.45.2, 13.28.3.

<sup>347</sup> On the medicinal benefits of the Baiae springs, see Celsus, *De medicina* 2.17.1 and Pliny the Elder, *NH* 31.2.4-5

<sup>348</sup> Horace *Ep.* 1.15.1-13:

... (nam mihi Baias  
Musa supervacuas Antonius, et tamen illis  
me facit invisum, gelida cum perluor unda  
per medium frigus. Sane murteta relinqui,  
dictaque cessantem nervis elidere morbum  
sulfura contemni vicus gemit, invidus aegris  
qui caput et stomachum supponere fontibus audent

Horace submits to the new treatment, but only reluctantly. His description of the fickle nature of crowds of health seekers is echoed in a famous statement of Pliny the Elder: “Medicine changes every day, being furbished along on the puffs of the clever brains of Greece.”<sup>349</sup>

This judgment of the volatile nature of mainstream medicine at Rome is found in the middle of Pliny’s previously mentioned lengthy diatribe against the medical profession, which argues with special vigor against ethnically Greek medical practitioners in Rome. Prominently featured in this diatribe are the personal physicians of the Julio-Claudian emperors, starting with Antonius Musa and continuing through Nero’s physician Thessalus ‘Iatronics.’<sup>350</sup> Evidence for how lucrative and powerful the position of imperial doctor was in this period is scattered throughout Pliny’s diatribe. The court physicians Cassius, Calpetanus, Arruntius and Rubrius, whose names do not appear elsewhere, were paid 250,000 sesterces per year. Q. Stertinius, who treated Caligula and Claudius, was paid twice as much, although he complained that he could have made even more as a city physician.<sup>351</sup>

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Clusinis Gabiosque petunt et frigida rura.  
Mutandus locus est, et deversoria nota  
praeterendus equus. 'Quo tendis? Non mihi Cumas  
est iter aut Baias,' laeva stomachosus habena  
dicet eques; sed equis frenato est auris in ore).

<sup>349</sup> Pliny *NH* 29.5.11: “Mutatur ars cottidie totiens interpolis, et ingeniorum Graeciae flatu inpellimur...”

<sup>350</sup> Pliny *NH* 29.5.7-11; 8.20-24.

<sup>351</sup> Pliny *NH* 29.5.8. Claudius’ physician C. Stertinius Xenophon, suspected of poisoning the empire, was a brother of Q. Stertinius: Tacitus, *Annales*, 12.61, 67.



Following in Musa's footsteps, imperial physicians of this period frequently introduced new and radical treatments in order to make a name for themselves. Among these innovators are Vettius Valens, who treated Claudius, and Thessalus, Crinas of Massilia, and Charmis, who all treated Nero.<sup>352</sup>

Both Pliny's and Horace's descriptions of medical fads in the Julio-Claudian period make clear the degree of influence an imperial doctor could have over the healthcare practices of the Roman public. An anecdote of Pliny's regarding the spread through senatorial families of a treatment of Charmis, in which patients were plunged into a bath of particularly frigid water, illustrates the social and performative nature of even deeply unpleasant medical fads at the elite level.<sup>353</sup> While Horace, as a member of Augustus' circle, could conceivably have consulted Antonius Musa personally, the hordes who abandoned Baiae for colder regions would likely have heard of the cold water cure either by word of mouth or through smaller-time doctors who marketed themselves as practicing the same kind of medicine as the emperor's physician.

The collection of pharmacological recipes written by Scribonius Largus are evidence for the conscious and active role that at least some elite physicians took in advertising their connections to the imperial family. Generally dated to the mid-to-late 40s CE, Scribonius's *Compositiones* begin with an epistolary dedication to his friend and patron C. Julius Callistus. It has been suggested by Thomas that Callistus was a fellow physician, but

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<sup>352</sup> Pliny *NH* 29.5.8-9. Many of the physicians mentioned by Pliny were infamous as well as famous. Two, as Pliny notes at 29.8.20, were accused of and executed for adultery with a woman of the imperial family, which is corroborated by Tacitus in *Annales* 11.35.7, 4.3.5, and 4.11.2. Charmis was exiled by Claudius for colluding with another physician to overcharge a patient (Pliny, *NH* 29.8.22).

<sup>353</sup> Pliny *NH* 29.5.10-1.

Hamilton, Machold, and Cassia argue instead that he is to be identified as the powerful freedman of Caligula and Claudius mentioned by Tacitus.<sup>354</sup> The specific reason given for Scribonius's dedication supports this latter understanding of Callistus's identity.

For as soon as you were able, you did not slacken your steps toward submitting my Latin medicinal writings to our divine Caesar. I had entrusted these powerful teachings to you since you yourself had earlier written to me and simply indicated what you felt: I have always placed great faith in your judgment. Furthermore, turning your brilliant mind and most benevolent heart towards me, you rewarded my diligence with actions rather than words when, lending your name to the edition, you dedicated my work to the emperor with praise.<sup>355</sup>

Scribonius nowhere suggests that Callistus was a physician, nor that he had any medical knowledge or even special interest in the subject. Rather, his defining characteristic seems to have been his influence at the imperial court, and with the emperor personally.

Scribonius's recipes themselves also reveal a preoccupation with Rome's most elite citizens, and are peppered with references to the imperial family in the context of specific drugs and ailments.<sup>356</sup> For example, Scribonius does not simply note that a certain

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<sup>354</sup> Thomas 1978, Hamilton 1986, Machold 2010, Cassia 2012. The relevant passages of Tacitus are found at *Annales* 11.29, 11.38, and 12.1-2. Some have suggested that Scribonius himself was also a freedman, e.g. Cassia 2012 and Joëlle Jouanna-Bouchet in the introduction to her 2016 translation of the *Compositiones*.

<sup>355</sup> Scribonius Largus, *Compositiones* ep.13: "ut primum enim potuisti, non es passus cessare tuae erga me pietatis officium tradendo scripta mea Latina medicinalia deo nostro Caesari, quorum potestatem tibi feceram, ut ipse prior legeres simpliciterque indicares mihi, quid sentiret: plurimum enim iudicio tuo tribuo; tu porro candidissimo animo et erga me benevolentissimo diligentiam meam sub tanti nominis editione non verbis, sed re probasti periculumque non minus tu iudicii quam ego stili propter me adisti, quo tempore divinis manibus laudando consecrasti." Trans. J.S. Hamilton 1986.

<sup>356</sup> Scribonius tells us that he accompanied Claudius to Britain at 163.10. The reference that he makes to Messalina at 60.10 suggests that at least some of the recipes included the *Compositiones* were written before her death in 48. Baldwin 1992.

dentrifice “splendidos facit dentes et confirmat,” but adds that “Octavia Augusti soror usa est” and “Augustam constat hoc usam. Nam Messalina dei nostri Caesaris hoc utitur.”<sup>357</sup> Another drug is said to have been used frequently by Agrippina and Antonia to treat fatigue.<sup>358</sup> Other individuals mentioned include the emperor Tiberius, Augustus’s adopted son Gaius, and an imperial freedman.<sup>359</sup> Even when referring to other physicians, Scribonius frequently returns to the imperial court. He brings up the archetypal imperial physician, Antonius Musa, in a recipe for relieving stomach pain.<sup>360</sup> In a recipe for an antidote to poison, Scribonius begins by praising the physician who created it, but quickly returns to the emperor: “Antidotus Marciani medici... id est perfecta. facit ad omnia haec una, ad quae superiores antidoti omnes. haec Augusto Caesari componebatur.”<sup>361</sup>

As Margherita Cassia has noted, Scribonius’s text is also remarkable on account of the individuals he does *not* name. First, all of the patients mentioned in the recipes are members of the imperial household, whether they are members of the Julio-Claudian dynasty themselves by blood or marriage, or powerful imperial freedmen. The conspicuous absence of any mention of Caligula suggests that Scribonius was not simply name-dropping, but was keenly aware of the political baggage attached to certain members of the imperial

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<sup>357</sup> Scribonius Largus, *Compositiones* 59.1-60.13.

<sup>358</sup> Scribonius Largus, *Compositiones* 271.1.

<sup>359</sup> Tiberius: 97.6, 120.1. Gaius: 151.1. “Anteros Tiberii Caesaris libertus”: 162.5.

<sup>360</sup> Scribonius Largus, *Compositiones* 110.4: “refertur in Musam Antonium.”

<sup>361</sup> Scribonius Largus, *Compositiones* 177.1.

family.<sup>362</sup> Elites outside of the imperial court are not mentioned, nor are foreign rulers (with the exception of the Bithynian king Mithridates, who appears only in the context of his famous recipe for theriac).<sup>363</sup> Subtler but also suggestive of Scribonius's status-consciousness are patterns in the medical authorities mentioned by Scribonius. Though he cites a roster of physicians and other medical authorities that overlaps significantly with the list of authorities mentioned by his contemporary Aulus Cornelius Celsus, Scribonius never mentions Celsus himself by name.<sup>364</sup> Even more provocatively, Cassia prosopographically connects Scribonius's most prominent sources to what she terms "il 'giunto' di collegamento di due scuole mediche prestigiose," one Cretan and one Sicilian, "che convergevano verso la capitale imperiale."<sup>365</sup> According to this interpretation, the medical treatment of members of the imperial family became a major locus of competition for recognition and favors among Greek provincial medical professionals quite early in the Julio-Claudian dynasty.

In the introduction to her translation of and commentary on Scribonius Largus, Joëlle Jouanna-Bouchet hints at another possible reason for the dominance of the imperial family in the *Compositions* when she wonders for whom the collection of recipes was

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<sup>362</sup> Cassia 2012, 65: "Scribonio... fu certamente molto "vicino" alla corte imperiale, un *entourage* di personaggi che dovette rappresentare anche il pubblico 'ideale' della sue opera... Unica, significativa, ma certamente spiegabile eccezione la mancata menzione di Caligola, alla cui ritorsione, non va dimenticato, era scampato Callisto, potente liberto e destinatario 'reale' delle *Compositiones*."

<sup>363</sup> Mithridates: Scrib. Larg. 170.

<sup>364</sup> Cassia 2012, 65: "L'omessa menzione di Celso potrebbe perciò interpretarsi come l'ennesima mossa prudente da parte di Scribonio che aveva tutto l'interesse a prendere le distanze da personaggi 'non allineati' con il potere imperiale."

<sup>365</sup> Cassia 2012, 65–66.

intended: “le recueil peut-il s’adresser à des specialists, médecins ou futurs médecins?”<sup>366</sup>

Based on Scribonius’s language and his emphasis on the importance of certain ingredients and dosages, as well as his special attention to defending the reputation of medicine as a field in the epistolary dedication, Jouanna-Bouchet concludes that the text must not have been intended only for a small, professional audience, who would not need such guidance or assurances. Instead, she suggests that the text was written “plutôt pour un public d’un rang social élevé, soucieux de sa santé.” Jouanna-Bouchet goes on to offer a convincing reason why Scribonius would target such an audience:

La vehemence du ton de l’épître, cette volonté de l’auteur d’affirmer l’unité de la médecine et sa noble conception du métier du médecin, sont aussi le signe d’une réaction à une évolution de la profession ressentie comme une dégradation.<sup>367</sup>

In other words, Scribonius seems to have had in mind the same Roman distrust of professional medicine that, a few decades later, Pliny the Elder tapped into for his diatribe against Greek doctors, and to have targeted the same audience. While she does not mention Scribonius’s constant name-dropping, that habit nicely complements her interpretation of the text as not simply a medical reference, but a sophisticated argument in favor of the medical profession. In other words, it was not only Scribonius’s reputation that stood to benefit from his associations with members of the imperial family. Using their names in this context would have signaled to an elite Roman readership that the people on whose health the fate of the entire state depended were enthusiastic and satisfied consumers of Greek-style medicine.

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<sup>366</sup> Jouanna-Bouchet 2016, li.

<sup>367</sup> Jouanna-Bouchet 2016, lii.

Written nearly two centuries later, two particular Galenic texts show how much power physicians connected to the imperial family continued to wield over trends in the kinds of medicine available to and sought out by the general public. First, at the start of his *On His Own Books*, he describes coming across two men in the book market of the Sandalarium in Rome arguing whether a certain book allegedly written by Galen himself was authentic or not.<sup>368</sup> It turned out to be a fake, and the book was immediately destroyed. While Galen notes that his books had been frequent targets of plagiarism around the Mediterranean, the Sandalarium case is notable because it is an example of a forger in Rome attempting to capitalize on Galen's name and reputation, but not the content of his actual work or writing.

In his *On Theriac to Piso*, Galen more explicitly ties the emperor himself to popular trends in medicine.

We know that the divine Marcus Aurelius who lately reigned righteously over us, who because of his intelligence paid close attention to the constitution of his body, used the drug [i.e., theriac] greedily and as if it were a food. For because of him the drug became more widely known and its action became clearer to men. For from the health which the emperor acquired, the antidote gained increased faith in its power.<sup>369</sup>

Just as Antonius Musa's cure of Augustus influenced the kind of hydrotherapy sought after by health-conscious Romans, Galen claims that it was specifically the emperor's use of this drug that drove its popularity outside the imperial court. Unlike the case of Musa, who was publicly honored for saving the emperor from an acute illness, however, Galen describes

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<sup>368</sup> Galen, *De libris propriis* 8-9 K xix.

<sup>369</sup> Galen, *On theriac to Piso* K xiv, 217. Trans. Robert Leigh.

Marcus Aurelius taking theriac constantly as a health supplement or preventative treatment. How, then, did the general public become aware of the emperor's daily drug regimen? A possible answer can be found later in the text. While introducing his own preferred recipe for theriac, Galen mentions that the method is "how we prepare it for the imperial family."<sup>370</sup> Notably, Galen attributes the recipe itself to the physician Andromachus, who had dedicated a verse version of the same recipe to the emperor Nero.<sup>371</sup> Like Scribonius, then, Galen is an example of a physician with close and legitimate ties to the imperial court who published recipes containing explicit and intentional references to which specific drugs the emperors and their families used.

While the reputations of Antonius Musa, Scribonius Largus, Andromachus, and Galen all benefitted from their connections with the imperial court, serving as an imperial physician could carry significant risks. As Marasco notes, the intimate position of the imperial physician in relation to the emperor's body meant that the physician was an easy target for accusations of murder when an emperor suddenly died, or of conspiracy to commit murder at any time.<sup>372</sup> The classic example of this is the case of Xenophon, whom Tacitus accuses of helping Agrippina to murder Claudius.<sup>373</sup> In light of their considerable popular influence, then, imperial physicians' fear of accidentally causing the death of the emperor likely influenced the range of treatments they were willing to perform. The therapeutic methods employed by imperial physicians were generally conservative,

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<sup>370</sup> Galen, *On theriac to Piso*, 262.

<sup>371</sup> Galen also reproduces the entire verse recipe in *On theriac to Piso* (233).

<sup>372</sup> Marasco 1997, 295.

<sup>373</sup> Tacitus, *Annales* 12.67.

consisting primarily of bathing regimens and dietary changes, and therefore they carried little risk of iatrogenic complications, even though some may not have been particularly enjoyable.<sup>374</sup> Although they may have at least partially been chosen in the interest of self-preservation, such treatments fit well within the precepts of the popular Methodist sect, of which some imperial physicians were prominent members, and may indeed have indirectly augmented the broad popularity of minimal, lifestyle-based medicine in and around Rome.<sup>375</sup>

While only relatively few physicians gained enough fame to capitalize on their connections to the emperor and influence medical fads, the entire profession could boast a special relationship with the Roman state that, because it started with Julius Caesar and Augustus, was closely linked to the emperor and to the reformed political system he represented. As mentioned above, emperors throughout my period periodically renewed the special privileges given to doctors around the empire by Julius Caesar and Augustus, furthering what Israelowich has called the “slow but steady... shift in their status from frowned-upon foreigners into highly reputed professionals.”<sup>376</sup> In many ways, this progress was closely tied to the general status of Greek culture at the highest levels of Roman society. Roman legislation often grouped physicians with other professionals that tended to be

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<sup>374</sup> Antonius Musa and Charmis prescribed cold baths; Crinas of Massilia prescribed dietary changes based on astrology. Pharmacological treatments were used, but, as in Scribonius Largus, these were usually gentle and frequently externally rather than orally administered. See Marasco 1997, 292-5 for examples.

<sup>375</sup> Among the followers of Asclepiades, the putative founder of the Methodist sect, were Antonius Musa and Thessalus. On the precepts of the Methodist sect, see Pliny the Elder, 26.8.14-16 and Celsus *De medicina* 3.4.1.

<sup>376</sup> Israelowich 2015, 26.



defined by their Greekness, such as grammarians and sophists. Such is the case for the Greek-language text of a Pergamene inscription of a Vespasianic edict freeing practitioners in these three fields from taxation and quartering duties,<sup>377</sup> as well as a late Republican *senatusconsultum* regarding the same group in Ephesus, which was renewed by Trajan.<sup>378</sup> Though the language is less precise in Latin-language texts, these three professions seem also to have been grouped together in legislation that focused on Rome itself, where their Hellenism would have been read as foreign. Suetonius tells us that Caesar's protections covered teachers of the liberal arts as well as physicians,<sup>379</sup> and that Augustus exempted "physicians and teachers, and a part of the household slaves" from an expulsion of *peregrini* from the capital in a time of crisis.<sup>380</sup>

By the middle of the second century, these exemptions seem to have caused financial and/or administrative problems for at least some cities in the Empire, leading Antoninus Pius to impose a limit on the number of physicians and educators per city who could claim exemption from the responsibilities of participation in civic offices (*tutela vel cura*) that were required of their peers:

Lesser cities can have five doctors immune from public duties, three teachers, and the same number of grammarians. Larger cities seven medical men and four of both types of teacher. The largest cities ten doctors and five rhetoricians and a similar number of grammarians. Beyond this number not even the greatest city is not granted immunity.<sup>381</sup>

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<sup>377</sup> TAPA 86 (1955) 348–9, Oliver 1989 no. 38; Israelowich 2015, 27.

<sup>378</sup> Israelowich 2015, 27.

<sup>379</sup> Suetonius, *Divus Iulius*, 42.

<sup>380</sup> Suetonius *Aug.* 42.3.

<sup>381</sup> Dig. 27.1.6, translation from Israelowich 2015, 29.

Though it was quickly revised to be less severe,<sup>382</sup> Pius's edict testifies to two important developments: first, as reflected by their higher allotment per city, Pius's administration seems to have considered physicians more important than teachers of the liberal arts. Second, the necessity of issuing this edict in the first place suggests that members of these highly educated professions were now so wealthy that their lack of participation in civic government posed problems for provincial cities, which depended heavily on their most fortunate citizens for the financial and organizational aspects of many civic functions.

There are two possible reasons for such a concentration of wealth in this one profession, which are by no means mutually exclusive. First, physicians could have simply seen a rise in income resulting from an increase in the number of patients seeking professional medical attention or the amount physicians could charge for their services. Second, the immunities granted to physicians could have made entering the medical profession so attractive that families or individuals who already possessed substantial wealth might have sought training without necessarily intending to practice, with the intention of legally evading their civic responsibilities. Although he attributed his choice of profession to the intervention of Asclepius rather than financial motivations, the promise of civic exemptions may well have been a factor that influenced Galen, the son of a wealthy landowner who was educated but certainly not a physician himself, to pursue a career in medicine.<sup>383</sup>

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<sup>382</sup> Dig. 50.4.11.3.

<sup>383</sup> The date of Antoninus Pius' edict restricting the number of such exemptions is unknown; it could very well have postdated the start of Galen's medical studies around 145 CE.

### **III. Minting health: Emperors and healing deities on Roman coinage**

#### *a. Coins and the communication of Imperial ideology*

Because of their large numbers, official nature, and relatively secure dating, coins have been an especially fertile source of evidence for scholars of Roman imperial ideology. Paul Zanker and Tonio Hölscher used numismatic evidence as part of their studies of the use of iconography to communicate specific aspects of early Imperial ideology.<sup>384</sup> Clifford Ando incorporated Zanker and Hölscher's work into a broader theory of the communication of imperial power.<sup>385</sup>

More recently, Carlos Noreña and Erika Manders have produced valuable quantitative studies of the specific messaging patterns of imperial coinage.<sup>386</sup> Though similar in scope and in their lines of questioning, the studies differ in two key aspects. The first major difference is their chronology. Noreña focuses on the high empire, from 69–235 CE, while Manders covers the overlapping but later period of 193–284 CE. This difference in time periods is responsible for a slight but key difference in their line of questioning: Noreña is interested in imperial self-representation at the height of Roman power, and his quantitative analysis therefore is synchronic, focusing on which coin types appeared the most frequently across his entire period. Manders, on the other hand, asks whether and how the turmoil of the third century resulted in changes in what had become traditional imperial self-representation, and so structures her quantitative analysis diachronically so

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<sup>384</sup> Zanker 1990, Hölscher 1987.

<sup>385</sup> Ando 2000.

<sup>386</sup> Manders 2012; Noreña 2011.

as to highlight changes in the relative proportion of coin types from the reign of one emperor to another.

The other primary difference between the two studies is one of methodology, an important consideration in quantitative numismatic research. Noreña relied on hoard evidence while compiling his database of 179,285 coins, on the basis that hoards reflect actual circulation and relative frequencies of types most accurately.<sup>387</sup> Manders, on the other hand, calculated relative frequencies from the types catalogued in *Roman Imperial Coinage*. While Manders acknowledges that “the percentages of RIC and the hoards do not wholly correspond with each other,” she compares her figures with the proportions of different coin types in “representative hoards” and finds “similar fluctuations in the percentages of coin types listed in the RIC and in the number of coins stemming from the hoards.”<sup>388</sup>

Despite the differences in time period and methodology, Noreña and Manders’ results are strikingly similar. Each identifies six imperial benefits that were represented with special frequency on coinage throughout the time period in question, which Manders calls the “core benefits.”<sup>389</sup> Noreña determined which benefits were most important by calculating the percentage of coin types depicting them in his database; his findings are divided by coin type (denarii vs. base metal coins) but not by emperor. Manders, on the other hand, simply counted how many emperors in her time period minted coins

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<sup>387</sup> Noreña 2011, 29.

<sup>388</sup> Manders 2012, 61.

<sup>389</sup> Manders 2012, 192.

communicating each value, without calculating the relative frequency of each type for the whole period.<sup>390</sup>

**Table 4.1. Core benefits of empire identified in Noreña 2011 and Manders 2008.**<sup>391</sup>

<b>Noreña (for the period 69–235 CE)</b> Numbers in parentheses indicate the percentage of known denarii and base metal coins, respectively, depicting this benefit	<b>Manders (for the period 193–284 CE)</b> Number in parenthesis indicates how many individual rulers minted types depicting this benefit
1. Victoria (16%   16%) 2. Felicitas (13%   13%) 3. Pax (12%   7%) 4. Concordia (12%   6%) 5. Salus (10%   14%) 6. Fortuna (9%   16%)	1. Felicitas (27) 2. Pax (26) 3. Concordia* (25) 4. Securitas (23) 5. Fides* (22) 6. Salus (21)

For the purposes of my research, the presence of Salus on both lists is particularly noteworthy because it suggests a significant and stable imperial interest in promulgating the idea of the Roman state as a guarantor of physical health and safety. More so than the other three benefits (Felicitas, Pax, and Concordia) that appear on both lists, however, Salus is a deeply complex concept that defies easy characterization or translation. This is especially true on coinage, where Salus could be depicted as any one of a variety of

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<sup>390</sup> Manders does, however, provide data for the relative frequency of each “core benefit” type by emperor.

<sup>391</sup> Noreña 2011, 109; Manders 2012, 192. Manders does not discuss the two benefits marked with an asterisk as imperial benefits *per se* because they “have a military connotation.”

different personifications, including Salus Publica, Salus Augusti, Salus Augusta, and Salus Generis Humani.

A number of studies published over the last century have attempted to disentangle the various types of personified Salus and to connect them to a historical narrative.<sup>392</sup> The two most exhaustive monographs, and the most influential today, are those of Marwood and Winkler. Marwood collected textual and iconographical evidence for the worship and representation of Salus from the early Republican period through late antiquity.<sup>393</sup> A major focus of his work is the degree to which Salus was associated with physical health by different groups of people and at different times. He concludes that the state cult of Salus started as an analogue to, and was greatly influenced by, the Hellenistic concept of *soteria*, or salvation in a broad sense.<sup>394</sup> Perhaps as early as the introduction of Asclepius in 293 BCE and certainly by the beginning of the second century BCE, however, Salus is also associated with the Greek Hygieia, who as the daughter of Asclepius is always connected specifically to bodily health.<sup>395</sup> By the fall of the Republic, numismatic evidence shows that Salus had begun to take on some of Hygieia's visual aspects, although Cicero's use of the term *salus*, and especially *salus publica*, are better understood as meaning "welfare" in a

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<sup>392</sup> Inter alia, Liegle 1942, Instinsky 1963, and Schwarte 1977. Weinstock's *Divus Julius* also briefly engages with the concept of Salus at 162-67.

<sup>393</sup> Marwood 1988.

<sup>394</sup> Marwood 1988, 147-8.

<sup>395</sup> As mentioned in Chapter 2, in 180 BCE the Senate expiated a portent-epidemic with prayers to Apollo, Asclepius, and Salus. Livy 40.37.1-3.

metaphorical sense rather than having any connotation of the physical health of individual Romans.<sup>396</sup>

Both versions of Salus seem to have persisted separately into the first century of the Principate, but were now largely connected to the person or family of the emperor. The precise meaning of Salus could be deduced by her epithet: Salus Augusta is a representation of the “beneficial power of the emperor” — or the emperor as *soter* — while Salus Augusti means the “health of the emperor” and visually more closely resembles Hygieia.<sup>397</sup> Other attested epithets, namely Salus Publica and Salus Generis Humani, appeared very rarely during the Principate, and not at all during the Julio-Claudian period.<sup>398</sup> Starting at the end of the first century CE, however, the Augusta/Augusti types of imperial Salus seem to “fuse” into one, with the iconography of Hygieia dominating on Salus coinage. Marwood connects this visual change to an ideological one reflected in the records of the Arval Brethren and Pliny the Younger’s *Panegyric*: a “developing imperial policy under Domitian and Trajan of projecting Salus Publica as dependent upon the mediation and health of the emperor.”<sup>399</sup>

Published seven years later, Winkler’s study builds on and refines Marwood’s narrative of the evolution of Salus’s appearance, aspects, and relationship to the emperor. Notably, he connects the late first-century CE fusion of Salus Augusta and Salus Augusti to a

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<sup>396</sup> Marwood 1988, 148; Cicero Pro Marcello 22; Winkler 1995, 30 – 35.

<sup>397</sup> Marwood 1988, 149.

<sup>398</sup> Salus Publica and Salus Generis Humani appeared on imperial coins for the first time, notably, under Galba.

<sup>399</sup> Marwood 1988, 152.

contemporary semantic shift in the meaning of the Latin word *salus* as seen in the letters of Pliny the Younger.<sup>400</sup> According to Winkler, while the term *salus* had historically meant “den allgemeinen psychisch-physischen Gesamtzustand eines Menschen” — general mental and physical wellbeing — it began around the end of the first century to assume the traditional meaning of *valetudo*, namely “Heilung und Gesundheit, d.h. Genesung von körperlicher Krankheit und deren Wahrung”: healing in the sense of recovery from a physical ailment and the preservation of health.<sup>401</sup> The use of *salus* in this way, according to Winkler, worked in concert with the ever-strengthening visual ties between the divinized Salus and Hygieia to anchor both the term and the deity to physical health rather than general salvation.

Winkler also notes that Salus’s appearances on coinage early in the Principate seem to be closely connected to real, discrete threats to the physical safety of the emperor or his family. For example, the first Salus Augusta coins, minted during the reign of Tiberius, are generally understood to be connected to Livia’s recovery from a serious disease, while a Salus coin of Nero has been associated with the aftermath of the Pisonian Conspiracy.<sup>402</sup> As Winkler puts it, making a show of gratitude to Salus seems to have been a “programmatische Reaktion” to anything that placed the emperor or one of his close

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<sup>400</sup> Specifically letters 8.1.3, 7.27.3, 4.24.3, and 5.16.3.

<sup>401</sup> Winkler 1995, 91. He continues: “Die Begriffe *valetudo* und *salus* unterscheiden sich im Sprachgebrauch also nicht mehr dadurch, dass der eine den Gesundheitszustand und der andere das allgemeine und übergreifende persönliche Wohlergehen umschreibt; vielmehr sind es nun antithetische Begriffe: *salus* im Sinne von Gesundheit, *valetudo* eher im Sinne eines negativen Gesundheitszustandes (Krankheit).”

<sup>402</sup> Livia: RIC I(2) Tiberius 47. Nero: RIC I(2) Nero 59. Winkler 1995, 58–62.



relatives in serious danger, whether disease, violence, or accident.<sup>403</sup> Starting with Hadrian and continuing through the second century, however, the large numbers of *Salus* coins consistently produced by the imperial mint suggest that *Salus* coins were no longer connected to any actual danger to the emperor. Rather, “diese Bilder immer mehr zu einem Ausdruck übergeordneter und beständiger politischer Ideologie” — these images had increasingly become an overarching and stable political ideology.<sup>404</sup>

While debates regarding the precise balance of wellbeing versus health meant by the term *salus* in different places and times continue,<sup>405</sup> Manders and Noreña generally agree with and rely on the basic narratives of the meaning of *Salus* built by Marwood and Winkler. The two do, however, ask different questions about the role *Salus* played in the state. Noreña notes that *Salus* and *Fortuna* both appeared more frequently on base-metal coins than on *denarii* during his time period. To explain this, he suggests that we think of them as “popular” or “social” values, as opposed to the “political” *Pax* and *Concordia* that featured more frequently on precious metal coinage. As such, he argues that *Salus* as a concept would have most appealed to non-elite Romans, and therefore more suited to the lower-value coins they used:

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<sup>403</sup> Manders 2012, 212, summarizing Winkler: “Motives for striking *salus* coins encompass the sickness of the emperor or other members of the imperial family, imperial travels and the propagation of successors.”

<sup>404</sup> Winkler 1995, 131: “Die mit Hadrian einsetzende grosse Zahl der *Salus*prägungen kann nur noch sehr schwierig mit konkreten historischen Situationen in Verbindung gebracht werden. Dies liegt einmal an der kontinuierlichen Prägung selbst: Wenn fast in jedem Jahr, wie unter Antoninus Pius oder Commodus, das Bild der *Salus* auf Münzen erschien, so wurden diese Bilder immer mehr zu einem Ausdruck übergeordneter und beständiger politischer Ideologie, und waren weniger eine programmatische Reaktion auf ein individuelles Ereignis.”

<sup>405</sup> See, for example, the argument for translating *salus* as “salvation” in Moralee 2004.

Indeed, the realm of both Fortuna and Salus was that of private experience: the quality of the annual harvest, the performance of the gladiator one has wagered on, the outcome of a board game, the reciprocation of amorous interest, the state of one's health, the welfare of one's family, etc. Such were the everyday concerns of the non-political classes.<sup>406</sup>

Manders, however, focuses not on potential audiences for depictions of imperial ideology, but rather on changes in the frequency of such depictions over time. She concludes that the relative proportion of "*saeculum aureum* types" – her turn of phrase for coins showing the benefits of the imperial state – increases precisely at the moments when the state is least likely to have actually enjoyed those benefits:

This discrepancy between publicity and practice implies that coin types propagating *saeculum aureum* not always referred to actual immaterial benefits. A substantial proportion of these third-century coin types must thus reflect promises, wishes or efforts to obscure a reality that was characterized by grave military problems, financial deficits and difficulties regarding imperial succession.<sup>407</sup>

In contrast to the "overarching and stable" presence of Salus in imperial ideology in the second century as noted by Winkler, then, Manders argues that emperors of the third century were more likely to produce coins depicting Salus when the empire or the emperor faced grave danger.<sup>408</sup>

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<sup>406</sup> Noreña 2011, 146.

<sup>407</sup> Manders 2012, 188.

<sup>408</sup> Manders 2012, 284: "It seems, thus, that, although the propagation of salus was part of ideological tradition, actual circumstances influenced the propagation of the health of Empire and emperor in the third century."

*b. Asclepius and Roman coinage*

Salus is not the only deity related to health to be commonly depicted on Roman coinage. Asclepius appears frequently as well.<sup>409</sup> An examination of the times when and geographical locations where especially large numbers of coins depicting Asclepius and/or another Greek figure closely associated with him – namely, Hygieia or his mother Corona – appear is crucially important to my inquiry for two reasons. First, unlike Salus, Asclepius is always unambiguously connected with physical health and healing in a medical sense, even if supernaturally so. Second, as a god of foreign origin, Asclepius offers an intriguing balance to the conceptual history of Salus, who was natively Roman (or at least Italic) despite her increasingly Hellenized appearance and the influence of Greek ideas on her meaning.<sup>410</sup>

Despite his early and dramatic introduction to Rome in 291 BCE, when he was brought from Epidaurus to save the city of Rome from a particularly severe epidemic, Asclepius does not appear on any surviving coinage minted at Rome until 68/69 CE, during the reign of Galba. The coins issued at this point were *sestertii* bearing the head of the emperor on the obverse and Asclepius, who (very unusually) is depicted nude, on the

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<sup>409</sup> I have chosen in the interest of clarity and simplicity to use the Latin spelling of the Greek name of the god consistently rather than switching between the Greek Asklepios and the Roman Aesculapius. While it is possible that this stylization could obscure some slight nuance in the use of the god in Greek and Roman cultures that I do not address otherwise, I have to date come across no compelling reason to distinguish between the two in the context of their numismatic application, nor to introduce the complicated question of which spelling to use on Roman imperial coinage minted in Greek-speaking provinces.

<sup>410</sup> Varro identifies Salus as a deity of Sabine origin, but, as Marwood says, his evidence is “circumstantial and indirect” compared to the evidence for a Roman origin. Varro, *Lingua Latina*, V.52; Marwood 1988, 147.

reverse.<sup>411</sup> Outside of the capital, however, Asclepius had already appeared with great frequency on provincial coinage bearing portraits of the emperor, suggesting an imbalance in the imperial use of the image of Asclepius on coinage based on location within the empire.

As a proxy method for measuring the development of the interest of Roman emperors in Asclepius over time, I have compiled a database of coin types that include both Asclepius and the image of an emperor or a member of the imperial family. For coins produced by the imperial mint, I, like Manders, rely on types identified in the authoritative *Roman Imperial Coinage* (hereafter RIC).<sup>412</sup> For coins minted in the provinces, which have not yet been fully organized in one consistent and systematic typology,<sup>413</sup> I use the collection of the American Numismatic Society as a representative sample, taking care to count each individual type only once.<sup>414</sup> While further research into the relative prevalence of these types in hoards will of course provide a more robust and securely quantifiable body of data, for the present study I am more interested in the question of when and where Asclepius coins were minted, and less in the question of how many of them actually

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<sup>411</sup> RIC I Galba 486, 487, 488. Galba was also the first to mint coins bearing the legend “Salus Generis Humani,” an extremely interesting coin type, discussed above, that appears only under certain emperors. After Galba, these coins appear under Nerva, Trajan, and Hadrian, then not again until Commodus, and then, interestingly, under Caracalla.

<sup>412</sup> Appendix 3.

<sup>413</sup> The *Roman Provincial Coinage* project has made great progress toward this ambitious and challenging goal since 1992, but as it still has considerable work to do in terms of standardization of terms and concordances, relying on it means running the risk of counting certain types more than once.

<sup>414</sup> When possible, I provide a standard typological reference for coins in the ANS collection. When none is available I use the ANS accession number. A table of types by emperor is included in Appendix 3.

circulated. The criterion of having an imperial figure on the coin, as it turns out, does not limit my sample size, as nearly every single Asclepius coin minted during the Roman period has an image of an emperor or a member of the imperial family on the obverse. The few exceptions I have encountered were minted in Athens, likely during the reign of Hadrian; these show Demeter and Telesphorus on the obverse.<sup>415</sup>

Before the Roman period, Greek coins with Asclepius had a standardized appearance, with a head of the god on the obverse and varying images on the reverse. By and large these were minted in cities with strong associations with the god. Cos was the birthplace of Hippocrates and the location of one of the most famous Classical-era medical “schools”, with the other in nearby Cnidus. Epidaurus and Pergamum were even more strongly associated with Asclepius himself, being the locations of two of the Greek world’s most celebrated Asclepius sanctuaries. To state the obvious, Asclepius had served as a highly local symbol on the coins of these cities, stemming from their reputations as places of healing and, therefore, as recipients of the god’s patronage.

Imperial provincial coins with images of Asclepius appeared in the Greek east as early as the reign of Augustus, but only sporadically.<sup>416</sup> In 83, an issue of Pergamene civic coinage bore facing busts of the emperor Domitian and his wife Domitia Longina on the obverse, and Asclepius and his daughter Hygieia on the reverse.<sup>417</sup> While Asclepius had long been a familiar figure on Pergamene civic coinage, his location on coins now changed: the god was relegated to the reverse of the coin while the emperor and his wife took his old

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<sup>415</sup> Sv.pl.98.11-14.

<sup>416</sup> Cos: RPC.2734. Laodiceia ad Lycum: RPC.2895.

<sup>417</sup> ANS 1944.100.43323.

spot on the obverse. The two male-female pairs imply a connection between the family of the god and the family of the emperor, something that would become more common on future coins. Hadrian visited Asia Minor in 123-124 CE, and is likely to have made a stop at the Pergamene Asklepieion. After this visit, issues of bronze civic coinage were minted with the head of Hadrian on the obverse and a full-length image of Asclepius, complete with his characteristic staff and snake, on the reverse.<sup>418</sup> Also dating from the Hadrianic period is another particularly strong piece of evidence that the emperor had begun to associate his family with that of the god, at least in this one part of the empire in which Asclepius was especially powerful: a bronze issue featuring the head of Sabina, Hadrian's wife, on the obverse, and Coronis, the mother of Asclepius, on the reverse.<sup>419</sup>

Outside of Pergamum, the reign of Hadrian saw Asclepius coinage appear for the first time in two major cities of the Greek east that had no traditional association with the god. First, the city of Ephesus minted a cistophorus with the head of Hadrian on the obverse and the standing Asclepius on the reverse.<sup>420</sup> While the Ephesian Asclepius cistophorus seems to have been unique, around the same time the Alexandrian mint began to produce a large number of bronze types showing the emperor and the healing god.<sup>421</sup> While Alexandria had no traditional connection to Asclepius, it had been a major center of medical learning since the Hellenistic period, and seems to have become even more famous

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<sup>418</sup> Metcalf 3.

<sup>419</sup> SNG von Aulock 1399; cf. SNG Copenhagen 481.

<sup>420</sup> RIC II Hadrian 481a-b = BMC.1053n = Metcalf M.90.336a.

<sup>421</sup> Under Hadrian: D.1617 – 1625. Under Antoninus Pius: D.2468, D.2471, D.2472, D.2477, D.2473, D.2158, D.2159. Under Marcus Aurelius: D.3146.

over the course of the second century CE. It was here that Galen, physician to the imperial family under Marcus Aurelius and Commodus, received an important part of his education. Like Pergamum, Alexandria therefore also had an obvious connection with the healing god. A large number of bronze issues similar to those of Pergamum were minted in Alexandria during the reigns of Hadrian and Antoninus Pius.<sup>422</sup>

The same basic emperor/Asclepius type in bronze civic coinage continued to be minted during the reigns of the Antonine and Severan emperors, sometimes with Asclepius' daughter Hygieia on the reverse as well.<sup>423</sup> During Septimius' reign, the association of Asclepius with the imperial family in the eastern provinces was strengthened. Coins with Septimius' wife Julia Domna on the obverse and Asclepius on the reverse began to appear in this period throughout Asia Minor, in Saitta, Elaea, Bagis, and Hadriani ad Olympum. Similarly, in 211 or 212, a bronze coin was minted in the Carian city of Halicarnassus that had facing busts of Septimius' sons Caracalla and Geta on the obverse and the gods Apollo and Asclepius on the reverse — thus suggesting an association between the two heirs to the imperial throne and the two gods. Another similar bronze coin minted around the time or perhaps after Geta's death on Cnidus shows Caracalla and his wife Plautilla on the obverse and Asclepius and Aphrodite on the reverse.<sup>424</sup> Cnidus had been the location of one of the two major Classical Greek medical schools, so the healing god does have a traditional connection to the island, but he had never before appeared on Cnidian coinage.

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<sup>422</sup> E.g. D.1617-1625, D.2158, D.2159, D.2468, D.2471-2473, D.2477, D.3146.

<sup>423</sup> e.g., BMC 279, BMC 291, BMC 285-6, BMC 301.

<sup>424</sup> ANS 1970.142.487.

The connection between Caracalla and Asclepius seems to have become even stronger when the emperor paid a visit to the Pergamene Asklepieion.<sup>425</sup> This visit was commemorated in several coins minted by local magistrates, all of which bear Caracalla's head on the obverse. The reverses include scenes of Caracalla approaching and greeting Asclepius, who is shown as a statue (Fig.4.5), in his temple, sacrificing with the emperor at an altar (Fig.4.6), and in the form of a serpent.<sup>426</sup> Cassius Dio and Herodian, neither whom held a high opinion of Caracalla, both claim that the emperor appealed to Asclepius on account of chronic poor health.<sup>427</sup> But seen in the context of the specific type of Asclepius imagery on the coins and the bigger context of provincial use of the god, Caracalla's visit can also be seen as a continuation of the redefinition of Asclepius according to the needs of the empire. Furthermore, the coins do not show the emperor coming to the god in supplication, but rather meeting him as an equal and in fact becoming worshipped alongside him as a *synnaos*. This was not a symbolic image invented for the coins: while in Pergamum, Caracalla had dedicated the city's third neokorate temple.<sup>428</sup>

Caracalla's association with Asclepius was an obvious point of civic pride within Pergamum, but the fact that Caracalla for the first time used the imperial mint in Rome to produce a full issue of coins bearing the image of Asclepius in 214 and 215 suggests that

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<sup>425</sup> Herodian 4.8.3. Rowan dates this visit to late 213: Rowan 2013, 132.

<sup>426</sup> Asclepius as statue: BMC Mysia (Pergamum) 320, SNG von Aulock 1414, SNG France 2231 – 2233, 2249. Asclepius in his temple: BMC Mysia (Pergamum) 325 = SNG France 2250-1 and BMC Mysia (Pergamum) 324 = SNG France 2245 – 8. Asclepius and Caracalla sacrificing: BMC Mysia (Pergamum) 322 = SNG France 2239. Asclepius as serpent: BMC Mysia (Pergamum) 326.

<sup>427</sup> Dio 78.15.5-7.

<sup>428</sup> Burrell 2004, 34-35.



the emperor's connection with the god was something more significant than the culturally informed recognition of an important provincial city.<sup>429</sup> The first-ever Asclepius coins minted at Rome were sestertii minted under Galba in 68/69 CE. These show the head of the emperor on the obverse and Asclepius, who, very unusually, is depicted nude, on the reverse. The Asclepius coins from the Roman mint next appeared under Antoninus Pius and likely commemorated the 450th anniversary of Asclepius' arrival at Rome. In addition to a striking medallion of 157 CE that showed the god in the guise of a serpent swimming to the Tiber island (Fig.4.4), we also find a bronze *as* of the same year with the emperor's head on the obverse and the god on the reverse.<sup>430</sup> The god did not appear on coinage produced by the Roman mint again until 194, when Clodius Albinus minted both an *as* and a denarius — the god's first appearance on a silver coin in the capital — in essentially the same type.<sup>431</sup> Septimius Severus minted an aureus, a dupondius, and a denarius showing the god at Rome in 207 CE, but in small quantities.<sup>432</sup>

Compared with the few earlier examples of Asclepius on Roman imperial coinage minted in Rome, the quantity of Caracalla's issues is striking. Rowan has found that the healing god appeared on the reverses of 4% of all silver Caracalla coins known from

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<sup>429</sup> RIC IV Caracalla 253 = BMC.452.105, RIC IV Caracalla 538B = BMC.485.279, RIC IV Caracalla 553A = BMC.489.292, RIC IV Caracalla 554b = BMC.489.292, RIC IV Caracalla 251 = BMC.451.103, RIC IV Caracalla 270a-d. Rowan, 2013, 129.

<sup>430</sup> RIC III Antoninus Pius 1341A = BMC.2034. The medallion was one of a series that commemorated Rome's early history, including Aeneas' arrival in Italy and the arrival of the cult of Cybele. See Rowan 2014.

<sup>431</sup> RIC IV Clodius Albinus 2 = BMC.88, RIC IV Clodius Albinus 57A = BMC.543

<sup>432</sup> RIC IV Septimius Severus 205, RIC IV Septimius Severus 597, RIC IV Septimius Severus 205, 775a, 775b. Rowan 2013, 111.

hoards.<sup>433</sup> When the hoard evidence is limited only to coins produced in 215 CE, however, that figure increases to 19% of the entire silver output of the imperial mint.<sup>434</sup> Only Apollo and Fides Militum appeared with greater frequency that year.<sup>435</sup> What's more, the iconography of Asclepius on Caracalla's bronze coinage minted at Rome broke with the precedent set by Antoninus Pius and followed by Clodius Albinus and Septimius Severus, which consisted of a standing Asclepius, nude from the waist up and leaning on a serpent-wrapped rod. Caracalla's bronze Asclepius issues included two new attributes: an *omphalos* and Telesphoros, both of which had previously appeared primarily on Pergamene coinage.<sup>436</sup>

Evidence for Caracalla's special relationship with the Pergamene Asclepius is not limited to coinage. As mentioned above, Herodian and Dio both wrote that Caracalla had sought out Asclepius and other healing gods due to chronic poor health, with no success.<sup>437</sup> Both writers were harsh critics of Caracalla's conduct as emperor, and especially of his murder of his brother Geta. Dio implies that Caracalla's ailment, as well as his inability to find a cure, was connected to his immoral actions as emperor.<sup>438</sup> Although he mentions neither Asclepius nor any other healing deities, the author of the Life of Caracalla in the *Historia Augusta* also ties Caracalla's health to his conduct: "After many measures directed

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<sup>433</sup> Rowan 2013, 112.

<sup>434</sup> Rowan 2013, 130.

<sup>435</sup> Rowan 2013, 118.

<sup>436</sup> Kampmann 1992/3 39-48. Rowan 2013 p.130-131.

<sup>437</sup> Dio 78.15.5-7, Herodian 4.8.3.

<sup>438</sup> Dio 78.15.5.

against persons and in violation of the rights of communities he was seized with an illness and underwent great suffering.”<sup>439</sup>

After Caracalla, Asclepius does not appear on any coin types of the imperial mint until the reign of Gallienus. Starting then and continuing until the end of the third century, a new and surprising legend appears on nearly every Asclepius coin from the imperial mint: SALVS AVG.<sup>440</sup> The same legend continued to appear on coins of the familiar Salus types during the reigns of each emperor who minted an Asclepius/SALVS AVG type as well.<sup>441</sup> Such a development suggests two significant changes in the use of Asclepius and Salus in Roman imperial ideology. First, the appearance of the same legend on coin types of two previously distinct deities suggests that the two had come to represent the same concept iconographically, something unprecedented in Roman history. Second, because the Salus types of the third century clearly follow the precedent set by the “fused” type of the late first/early second century CE in terms of both iconography and legend, we can deduce that it was Asclepius whose precise meaning changed more significantly at the start of my Transitional Period 2.

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<sup>439</sup> SHA Caracalla 5.3: “et cum multa contra homines et contra iura civitatum fecisset, morbo implicitus graviter laboravit.”

<sup>440</sup> RIC V Gallienus 66, RIC V Gallienus 511A-B, RIC V Postumus 326, RIC V Postumus 363, RIC V Postumus 382, RIC V Postumus 281, RIC V Postumus 284, RIC V Postumus 86, RIC V Postumus 165, RIC V Claudius Gothicus 165, RIC V Claudius Gothicus 166, RIC V Claudius Gothicus 167, RIC V Carausius 163, RIC V Carausius 999.

<sup>441</sup> Inter alia, RIC V Gallienus 512, RIC V Gallienus 274, RIC V Gallienus 275, RIC V Gallienus 657, RIC V Gallienus 581, RIC V Postumus 85, RIC V Postumus 161, RIC V Postumus 162, RIC V Postumus 163, RIC V Postumus 164, RIC V Claudius Gothicus 8, RIC V Claudius Gothicus 98, RIC V Claudius Gothicus 99, RIC V Claudius Gothicus 190, RIC V Claudius Gothicus 242.

#### IV. Conclusions

In a chapter titled “The Identity of Physicians during the High Roman Empire,” Israelowich offers the following narrative:

In the realm of health care, the Roman encounters with the Greek world encouraged the establishment of medicine as a profession, and although the initial Roman reaction toward the arrival of Greek medicine was suspicion and reluctance, Romans grew receptive and even appreciative. Although practicing medicine was still looked down upon by the members of the Roman aristocracy (and continued to be viewed as something foreign well into late antiquity,) the Roman world acknowledged, at least in practice, the superiority of Greek medicine over traditional Roman patterns of healing.<sup>442</sup>

There is a paradoxical tension in this and other narratives of Greek medicine in Rome that can be substantially alleviated by recognizing the Roman *state* (in its various forms) as something distinct from, though influenced by, Roman *culture* more generally. Roman public opinion of Greek medicine seems to have fluctuated over time, but was always heterogeneous. Many individuals living in the Republican period certainly embraced Greek medicine even while Cato railed against it, and some, like Pliny the Elder, continued to be suspicious of Greek doctors centuries later. More important for the legal and social status of professional physicians, and for the question of Roman conceptions of public health, was the opinion officially held by the Roman state itself.

This official opinion underwent a significant and permanent change with the fall of the Republican form of government. Practitioners of medicine profited materially and socially from the legal benefits that were established at the very beginning of the Julio-Claudian dynasty and were reaffirmed by subsequent emperors. The profession at large

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<sup>442</sup> Israelowich 2015, 18.

also benefitted more abstractly from the connections between individual emperors and physicians, as well as non-physician medical writers. With the notable exceptions of Celsus and Soranus, a striking number of major figures in Roman medical history who practiced after the fall of the Republic were closely and explicitly connected to one or more emperor, as Antonius Musa, Xenophon, Galen, and others; similarly, major medical writers like Pliny the Elder and Scribonius Largus dedicated their books to the emperor or a member of his court.<sup>443</sup>

While individual physicians saw a major jump in status at the beginning of the Principate that grew steadily over time, the Roman state was slower to integrate the supernatural aspects of Greek medicine into imperial ideology. A comparison of the relative patterns of Salus and Asclepius coinage minted in Rome offers an intriguing parallel to the status of human physicians. Despite only occasional appearances on coins of the Republican period, Salus appeared quite frequently on coins produced by the imperial mint at Rome almost from the start of the Principate. Coins and textual evidence alike show that the personified Salus in her various different aspects was always intimately connected with the emperor, the imperial family, and the Roman state, although her precise meaning evolved over time. Even by the start of the second century CE, when she became a stable part of imperial ideology that conceptually had come to mean physical health more than general welfare and increasingly resembled the Greek Hygieia in visual

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<sup>443</sup> More obscure medical texts were dedicated to emperors as well. Pliny notes at *NH* 25.2.4 that Gaius Valgius dedicated his lost book on medicinal plants to Augustus. In *On theriac to Piso*, Galen reproduces a verse recipe for theriac that a physician named Andromachus had written for and dedicated to the emperor Nero.

representations, however, Salus as a deity was never explicitly connected to the medical profession.

Asclepius, on the other hand, was always closely associated with human doctors of the broadly Hippocratic tradition, both in and outside of Rome. Asclepius had, like Salus, appeared in Rome's religious history centuries before the fall of the Republic, but images of the healing god did not appear on a single known coin minted in the capital until late in the first century CE, and not in any substantial quantities until the beginning of the third century. Asclepius did, however, consistently appear on civic coinage that also bore images of the emperors in the Greek-speaking eastern provinces as early as the reign of Augustus.

This geographic discrepancy in the production of Asclepius coinage suggests that, at least until Caracalla, the emperors and the imperial administration as a whole thought of Asclepius as a highly location-specific god, and not one who had any special connection to the core of the Roman state or the person of the emperor. Furthermore, the locations that produced significant amounts of emperor/Asclepius coins included not only the two major Asklepieion-centers of Pergamum and Epidaurus, but also locations that were more famous as the homelands or training grounds of the best human physicians of the ancient world. Cos, the home of Hippocrates and Claudius's doctor Xenophon, did have its own Asclepius sanctuary, but Alexandria, where Galen refined his medical skills, did not — the local deity associated with healing there would have been Sarapis, not Asclepius, and yet the latter appeared on a large number of Alexandrian bronze coin types of the second century.<sup>444</sup>

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<sup>444</sup> Under Hadrian: D.1617 – 1625. Under Antoninus Pius: D.2468, D.2471, D.2472, D.2477, D.2473, D.2158, D.2159. Under Marcus Aurelius: D.3146.

In this context, the fact that the Roman imperial mint produced significantly more coin types showing Asclepius than Salus during the reign of Caracalla is especially striking.<sup>445</sup> Dio and Herodian explain the emperor's special interest in the god as a result of a chronic disease, but Caracalla was hardly the first emperor to suffer poor health. Augustus and Claudius, notably, were both famously sickly. While both bestowed lavish honors upon their Greek physicians, it was Salus and not Asclepius who was associated with and thanked for the recovery of the Julio-Claudian emperors' health as well as that of their families. Any appearance of or honor paid to Asclepius in connection with an emperor's health was focused on the person of the physician himself, rather than that of the emperor. When the Roman people wished to honor Antonius Musa for saving Augustus's life, for example, they erected a statue of him next to one of Asclepius, presumably at the god's geographically isolated sanctuary on the Tiber Island, outside the original pomerium and away from Rome's civic center. Similarly, Tacitus tells us that while Claudius made much of the ancestral connection between Cos and Asclepius when he granted the island's population freedom from taxation to honor Xenophon, he did so in a way that emphasized Asclepius's fundamental non-Roman nature: he quotes the emperor as saying that "the Coans ought to be exempted from all forms of tribute for the future and allowed to tenant their island as a sanctified place subservient only to its god."<sup>446</sup>

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<sup>445</sup> RIC records 24 Asclepius types and 8 Salus types under Caracalla, respectively making up 2.54% and 0.84% of all deities appearing on Caracalla's coinage. Cf. Manders 2012, 213: Less than 2% of Caracalla's coin types showed Salus, and Rowan 2012, 112: 4% of silver types minted during Caracalla's sole reign showed Asclepius.

<sup>446</sup> Tacitus, *Annales* 12.61: "precibusque eius dandum ut omni tributo vacui in posterum Coi sacram et tantum dei ministram insulam colerent." He also accuses the emperor of using Cos' medical history as a way to disguise the fact that the immunity was a favor granted to

In the case of Caracalla, however, we hear of no physician acting as intermediary between the emperor and Asclepius, suggesting a new stage in the relationship between the Greek medical world and the Roman state. Unlike the bestowal of special privileges upon practicing physicians in cities around the empire, however, Caracalla's interest in Asclepius does not seem to have had any connection to the health or wellbeing of Roman citizens at large, except inasmuch as the body of the emperor had come to serve as metonymy for the state. In this sense, Asclepius can be seen as having taken on some of the aspects of the original *Salus Augusti* – the guarantor of the health of the emperor. The appearance of *SALVS AVG* legends on nearly all imperial Asclepius coin types after Caracalla further supports this interpretation. No longer limited to the celebration of Greek medicine or the cities famous for producing Greek doctors, Asclepius was now for the first time directly and explicitly tied to the *salus* of the Roman emperor himself.

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an individual (Xenophon) rather than a recognition of the island's many other contributions to the empire.



## Soldiers and Civilians in Roman Public Health

The preceding chapters have focused almost entirely on the public, civilian spheres of the Roman world: aqueducts in urban centers, public sacrifices, and imperial coinage. The Roman military, however, demands consideration for two major reasons. First, the military has featured especially heavily in previous historiographies of Roman medicine and sanitation, which has led some scholars to conclude that Roman healthcare in general was as uniform, formal, and rational as the healthcare of the Roman military is often thought to be. Second, the military was intimately connected to Roman imperial power and to the person of the emperor both symbolically and materially, making the bodies of soldiers an important test case for the ideas about health and the state discussed throughout this dissertation.

In this chapter I assess how the provisions made for the healthcare of imperial soldiers fit into the broader whole of Roman public health. Specifically, I focus on two questions. The first is how much of an influence military medicine had on the healthcare of the Roman population at large. An especially important piece of evidence here is the corpus of epigraphic sources from across the empire that attest to physicians both civil and military. Second, I ask whether the state-sponsored healthcare of a specific and limited subset of citizens (and non-citizens, in the case of the auxiliary troops) serving a specific role for the benefit of the state should be considered an aspect of Roman *public* health, in the sense of having a perceived positive effect on the wellbeing of the entire population. Here, I consider two non-military groups that also seem to have received some type of

state-funded healthcare, Vestal Virgins and *servi publici*, as comparanda for the Roman army medical corps.

### **I. The military in the history of Roman medicine and sanitation**

Numerous historians have asserted that the Roman military corps acted as a circulatory system for medicine, attracting physicians away from urban centers to the provinces, where they introduced a standardized form of Roman medicine to virgin populations. The following two passages, published by two different scholars nearly three decades apart, attest to the lasting power of this narrative.

[I]t is easy to imagine that the work of military doctors would not be restricted to soldiers alone. Either on a formal or, more probably, an informal basis, people from surrounding farms, villages or small towns may often have come to the fort for treatment by the medical staff... Military doctors were able, quite literally, to expand the frontiers of Roman medicine... It is probably fair to say that the Roman army was the single most powerful agency in the spread of Graeco-Roman Medicine.<sup>447</sup>

Outside of the household, the army was the most significant arena in which health care was practiced during the Roman Empire, because of its scale, geographical reach, and connectivity... [which] enabled a swift and consistent transmission of medical ideas and practices.<sup>448</sup>

If true, this narrative would have enormous implications for our understanding of the role of the state in the public health of the entire population of the empire, if in an indirect way. First, the deployment of already-practicing physicians within a military unit would mean that the state itself regularly paid for the relocation of trained medical professionals to

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<sup>447</sup> Jackson 1988, 137.

<sup>448</sup> Israelowich 2015, 87.

different regions of the empire where, as has been alleged, they would have treated (and possibly also trained as physicians) local civilians in addition to the soldiers in their unit. Second, the idea of standardized military medical care suggests that the Roman state took an active role in determining which specific subtypes of Greco-Roman medicine were the best, and in enforcing disciplinary norms.<sup>449</sup> Finally, a state-funded movement of clinically homogenous practitioners who treated soldiers and civilians alike would have reduced regional variation in the types of medicine practiced in both military and civic arenas across the empire, even in areas that were not new to Greco-Roman medicine as a concept.<sup>450</sup>

Ubiquitous as it is, this reconstruction of the diffusion of Greco-Roman medicine by way of the Roman army is not actually supported by much evidence. The Jackson passage above is full of conjectural statements: “it is easy to imagine” that army doctors treated local villagers who “may often have come to the fort for treatment;” it is “probably fair to say” that the army was the primary vector that transmitted medicine throughout the Roman world. This is certainly not an improbable narrative by any means, but it is not grounded in hard evidence. While Jackson uses careful, qualified language, his “may have”

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<sup>449</sup> Israelowich 2015, 87: “That the Roman imperial army chose these physicians allows an insight into the conceptual scheme guiding the imperial government, from the emperor at the top down through the legal, administrative, and military ranks, regarding the nature of health care, by reviewing the establishment, form, and aims of a medical corps. Through their preference for healers who were predominantly of Greek origin with a Hellenistic medical training, the Roman authorities dictated the dominant heuristic model that formulated illness as disease and a particular set of surgical procedures for treating injuries.”

<sup>450</sup> Israelowich 2015, 87-88: “In addition, a high level of central administration, along with the spread of military theories and techniques, turned the Roman imperial army into a network through which medical ideas and practices were easily diffused, with the type of health care in the individual military units canonized into a unified whole.”

and “probably fair to say” have tended solidified into declarative statements in the hands of other scholars.<sup>451</sup>

Recent studies have made clear the necessity of reconsidering certain aspects of the narrative presenting the Roman army as the producer, regulator, and distributor of a rational, regular type of Greco-Roman medicine and sanitation across the entire Mediterranean world. Ann Olga Koloski-Ostrow has shown that latrine technology was employed widely in Italian cities before it began to appear in frontier military camps, rewriting the chronology of Roman sanitation and moving the locus of technology adoption and transfer from the military camp to the civilian city.<sup>452</sup> More directly applicable to this chapter’s central questions, Patricia Baker has ably deconstructed the narrative of a uniform and sanitation-oriented Roman military medical corps, as well as the reliability of the archaeological criteria for the identification of the structures known as *valetudinaria*, which have since the mid-twentieth century been interpreted as proto-hospitals.<sup>453</sup> Baker’s work is largely limited to the military itself: she questions the degree of standardization and hierarchy among military medical practitioners, as well as the extent to which regional medical cultures may have influenced beliefs about disease and healing in different parts of the empire. While she does not provide much in the way of positive alternative interpretations, Baker’s skeptical approach highlights how unquestioningly historians and archaeologists have adopted narratives of military medicine, often without directly engaging with the evidence itself. In this section, I examine one body of evidence that has a

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<sup>451</sup> Wilmanns 1995; Israelowich 2015.

<sup>452</sup> Koloski-Ostrow 2015.

<sup>453</sup> Baker 2002, 2004b.

great deal of potential to elucidate the degree to which Roman military medicine actually shaped healthcare in the civic sphere.

## **II. Identifying Roman military physicians: Demographic profile, geography, and chronology**

Bernard Rémy's careful surveys of physician inscriptions from the western provinces offer a valuable corpus of evidence that complements the archaeological data provided by structures identified as *valetudinaria*.<sup>454</sup> Like many bodies of evidence in Roman history, the sample size here is small. Still, a simple comparison of the physicians' ethnic, linguistic, and societal characteristics (inasmuch as can be gleaned from the inscriptions) shows striking regional variation. In addition to supporting Baker's conclusions regarding the lack of true internal standardization, I argue that this data suggests that Roman military medicine was less well integrated into broader Roman medical culture than has often been assumed.

**Table 5.1. Epigraphically attested military physicians by region, Western Empire**

<b>Region</b>	<b>Total # physicians known from inscriptions</b>	<b># physicians explicitly associated with military</b>	<b>% physicians explicitly associated with military</b>
Iberia	19	0	0%
Gaul	24	1	4%
Germania	18	10	55%
Britannia	5	2	40%

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<sup>454</sup> Rémy 1984, 1987, 1991, 1996, and 2010.

The one medical inscription with a clear military connection from Gaul, which was found reused in the foundations of a church in Lyon (ancient Lugdunum), identifies the physician concerned as the *medicus castrorum* of the cohorts XIII urbana.<sup>455</sup> Originally based in Rome and then Carthage, this urban cohort seems to have been relocated to Lugdunum (where the similar cohorts I urbana was already stationed) around 90 CE. As their names suggest, these two cohorts were charged with protecting urban areas rather than frontiers.<sup>456</sup> Rémy compares this inscription to one found in Roman naming Q. Marcius Artemidorus, *medicus castrorum* of the *equites singulares Augusti*, the cavalry of the Praetorian Guard.<sup>457</sup> Also comparable are two funerary inscriptions of members of the Praetorian Guard from Rome — both *medici cohortis* (one of whom was also a *veterinarius*) — and another inscription from Gaul.<sup>458</sup>

While Domaszewski suggested in 1908 that these urban positions would have been especially attractive for highly skilled physicians, the military medical practitioners stationed in cities do not actually seem to have been of higher rank or skill than those who served on the frontiers.<sup>459</sup> Furthermore, evidence does not suggest that these physicians

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<sup>455</sup> The inscription is CIL XIII 1833 = ILS 2126: “D(iis) M(anibus) / M(arci) Aquini(i) Verini / optioni karce/ris ex cohort(e) XIII / Urban(a). Bononi/us Gordus medi/cus castrensis / et M(arcus) Accius Modes/tus et Iulius Mater/nus, milites, hered(es) / faciend(um) cur(averunt).”

<sup>456</sup> Echols 1961, 28: “The paradox involved in the phrase “provincial urban cohorts” can be resolved, I suggest, by the fact that while both of these units were “provincial” in their stations, they were both “Rome-urban” in their origin.”

<sup>457</sup> CIL VI 31172

<sup>458</sup> Rome: CIL VI 2594, CIL VI 37194. Gaul: *Annee Epigraphique* 1937, 180.

<sup>459</sup> Baker 2004, 44.

were numerous enough or specialized enough to serve all the needs of urban troops. Instead, the urban *medicus castrensis* and *medicus cohortis* may have served functions that were more focused on triage or first aid, with troops consulting specialized civilian physicians when needed (perhaps facilitated by the administration of the unit). One Roman inscription attests a *medicus clinicus* associated with the Praetorian Guard, and another a *medicus chirurgicus*.<sup>460</sup> These types of specialist are both unknown on the frontiers, where titles include *medicus legionis*, *medicus vexillationis*, *medicus alae*, *medicus ordinarius*, *miles medicus*, *medicus duplicarius*, and most frequently just *medicus*. While numerous attempts have been made to distinguish among these titles and to fit them into a hierarchy, none suggest any specialization and some, namely the *medicus ordinarius*, *miles medicus*, *medicus duplicarius*, imply relatively low pay levels.<sup>461</sup>

The lack of military identification in the texts of all but one of the physician inscriptions from Iberia and Gaul is certainly not positive proof that the physicians represented were never involved with the military. A comparison of the discernable juridical status of these physicians, however, also reveals the physicians epigraphically attested in the German provinces to be outliers.

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<sup>460</sup> CIL VI 2532, *AE* 1945: 62. Baker 2004, 44.

<sup>461</sup> Gummerus' 1932 publication of all known Roman physician-related inscriptions allowed for systematic comparison of the various titles mentioned. Richmond 1952 believed that army healthcare personnel were organized into two primary categories: *medici ordinarii* and *capsarii* (wound-wrappers). Scarborough 1968 and Wilmanns 1995, following an early claim in Domaszewski 1908, argued that true physicians were almost exclusively assigned to legionary units, while auxiliary troops were limited to technicians with lower levels of training like *capsarii*. Nutton 1969 and Davies 1970, however, saw a more uniform service equally available to all members of the military in which the different titles denoted position in a unified hierarchy of healthcare providers rather than the status of the patients.

**Table 5.2: Legal status of physicians in the Western provinces from inscriptions**

	Freedman	Ingenuus	Total citizens	Peregrinus	Slave	Unknown	Total
<b>All</b>	29	22	51	5	4	6	66
All Military	4	8	12	0	0	1	13
All Civilian	25	14	39	5	4	5	53
<b>Iberian provinces</b>							
All	12	5	17	0	2	0	19
Military	0	0	0	0		0	0
Civilian	12	5	17	0	2	0	19
<b>Gaul</b>							
All	8	8	16	2	2	3	23
Military	0	1	1	0		0	1
Civilian	8	7	15	2	2	3	22
<b>German provinces</b>							
All	8	8	16	1	0	2	19
Military	3	6	9	0	0	0	9
Civilian	5	2	7	1	0	2	10
<b>Britannia</b>							
All	1	1	2	2	0	1	5
Military	1	1	2	0	0	1	3
Civilian	0	0	0	2	0	0	2

(Based on Rémy 2010 data)

In the above sample, inscriptions from the Iberian provinces represent the highest proportion of freedman physicians, while Gaul and Germania's numbers were even. In Gaul



and Britain, epigraphically attested freedmen and *ingenui* were roughly equally likely to be military or civilian doctors, but in the German provinces, the *ingenui* who left inscriptions were three times more likely to have been military physicians. Also anomalous is that the Iberian Peninsula, and more specifically the city of Cordoba, was home to the only public doctor attested epigraphically in these provinces.<sup>462</sup>

Rémy has focused his efforts on inscriptions recovered in the provinces of western Europe, but the northern frontier of the Roman empire stretched all the way to the Black Sea. While the northern borders of Dalmatia and the Moesias shared many characteristics with the German *limes* due to the permanent installations of the Roman military there, the urban centers of the Balkan provinces predated the Roman Empire and had been largely shaped by Hellenistic culture. A study of the archaeological and epigraphic evidence for healthcare in Moesia Inferior by Dan Aparaschivei highlights the stark differences in medical culture that could exist even within one small province. Following Rémy's model, Aparaschivei produced a database of 13 inscriptions identifying physicians found within the province, along with any demographic information about the physicians that can be gleaned from the inscriptions.<sup>463</sup> His findings show a near-even split between military and civilian physicians: six include a military title, and seven do not.

When the findspots of these inscriptions are mapped, however, it becomes clear that the two groups of physicians were not geographically distributed evenly across the province. All of the military-identified physician inscriptions were recovered at known

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<sup>462</sup> Rémy 1984 Iberia 10 = Rémy 2010 no.14 , from Cordoba, dated to 1<sup>st</sup> half of 1<sup>st</sup> c AD

<sup>463</sup> He also includes one inscription found in Asia Minor mentioning a physician of Moesian origin, which I omit here.

military sites, and primarily ones on or near the banks of the Danube.<sup>464</sup> Civilian physicians are attested at only two of the military sites, Novae and Troesmis. No physicians claiming military titles, on the other hand, are attested in the major cities located further south of the Danube or on the shores of the Black Sea, although the grave stele of one doctor — Asclepiades, a Greek-speaking second-century *archiatros* of Odessos — does show some military iconography.<sup>465</sup>

Another important variable in the inscriptions from Moesia Inferior is language. All of the explicitly military-associated physician inscriptions are written in Latin, while the inscriptions found in the major cities of the province (e.g. Tomis and Odessos) are in Greek. This includes the above-mentioned grave stele of the *archiatros* Asclepiades, who seems to have identified most strongly with his civic role at the time of his death even if he did serve in the military at some point, as Aparaschivei argues.<sup>466</sup> An ethnic factor seems to have come into play regarding whether a physician worked in the military or not even in Rome itself, where, as Baker notes, military-affiliated physicians frequently have Latin names where “one might expect more doctors with Greek names.”<sup>467</sup> Further, many of the military physicians who did have Greek cognomina also bore imperial gentilicial names like Julius or Flavius, possibly suggesting that they were imperial or public freedmen, and not the

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<sup>464</sup> Two were discovered north of the Danube, at Tyras.

<sup>465</sup> Mihailov 1970: no. 150; Samama 2003: no.94.

<sup>466</sup> Aparaschivei 2012.

<sup>467</sup> Baker 2004, 41, citing CIL VI 37194=ILS 9071, CIL VI 2532=ILS 2093, CIL VI 2594 among others.

former slaves of private individuals.<sup>468</sup> Silver takes this observation a step further, making the provocative argument that a substantial number of these freedmen may have worked (in a medical capacity or otherwise) in the military even before manumission, as public slaves assigned to army units.<sup>469</sup>

Having a full Latin name suggests not only a person's primary language but also hints at citizenship, and therefore the types of names in medical inscriptions mark important demographic, ethnic, and also legal status distinctions between military and civilian physicians. As has been shown by prosopographical studies time and again, doctors in the Roman world in general tended to be ethnically Greek and were especially likely to be freedmen or *peregrini*.<sup>470</sup> If a significant number of practicing physicians in the Roman world did indeed serve as military doctors at some point, as many scholars have claimed, we should expect the demography of all doctors in the Roman world to look quite different from what all previous studies into the identity of Roman doctors have shown. It is quite difficult to reconcile the narrative of the military as the primary driver of Roman medicine with this epigraphic evidence. To continue to use that narrative to characterize Roman

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<sup>468</sup> Bader 2014 records 24 military doctors with names suggesting that they were imperial or public freedmen. Rémy discusses several doctors with imperial gentilicial names, but does not identify any as imperial freedmen. Some, like civilian doctor Tiberius Claudius Apollinaris of Tarraco, he describes as having been "affranchi par un patron qui avait évidemment le même prénom... et le même gentile" as the emperor (Rémy 2010, 110). He identifies others as never having been enslaved at all. Such is the case for *medicus ordinarius* Titus Flavius Processus, who he takes to be a member of a family of Germanic origin that received citizenship during Titus' reign (Rémy 2010, 165).

<sup>469</sup> Silver 2016, 214-215.

<sup>470</sup> In 1969, Vivian Nutton estimated that only 19.7% of epigraphically attested medical practitioners in the first two centuries CE were freeborn citizens, and that 59% of those known from the first century CE were freedmen. Nutton 1969.

medicine in its entirety, we must accept at least one of three unlikely possibilities: 1) that ethnically Latin, citizen doctors had a more significant presence in the civic arena than has ever been suggested, 2) that a majority of military physicians actually had non-Latin or non-citizen origins but were far less likely to leave inscriptions than either Latin-origin military physicians or non-Latin civilian physicians, or 3) that it was common for civilian physicians of Greek origin to receive their training from ethnically Roman military doctors instead of other Greek physicians.

Epigraphic evidence therefore suggests that the degree to which professional medicine was associated with the Roman military depended a great deal on location and cannot be generalized to the empire as a whole. On the Danubian *limes*, as well as in Britain, the association seems to have been quite strong, while in other areas — especially urban ones — it was weak. The pre-Roman influence of Hellenistic culture is a good explanation for the lack of a military flavor to medicine in cities on the Black Sea, not to mention in Asia and Greece itself, but the situation in the Iberian peninsula and Gaul suggests that Greek-style medicine did not require the Roman military as intermediary in the West. Instead, evidence suggests that medicine could and did spread through civilian or even civic networks: the physician inscriptions from all western provinces except the German ones were found overwhelmingly in urban contexts.

**Table 5.3: Locations of physician inscriptions in the western provinces**

Province	Provincial capital	Major towns	Other urban areas	Forts	Rural	Unkno wn	Total
Lusitania	5	1	2	-	-	-	8
Baetica	3	2	1	-	1	-	7
Hisp. Cit.	1	3	-	-	-	-	4
Britain	-	4	-	1	-	-	5
Gallia Narbonensis	7	5	-	-	1	1	14
Aquitania	2	-	-	-	-	-	2
Lyon	3	1	-	-	-	-	4
Belgica	-	2	1	-	1	-	4
Germania Sup.	2	4	1	7	-	-	14
Germania Inf.	1	1	-	2	-	-	4
Total (% of Total)	24 (36.4%)	23 (34.8%)	5 (7.6%)	10 (15.2%)	3 (4.5%)	1 (1.5%)	66

(Table adapted from Rémy 2010, 31)

Chronology is also an important factor here, as has been noted (if inconsistently) throughout the history of Roman military medicine.<sup>471</sup> Archaeological as well as textual evidence for truly organized Roman military medicine is rare before the start of the second century CE, and certainly none of the known military physician inscriptions or structures identified as *valetudinaria* date as early as Augustus's lifetime.<sup>472</sup> The military cannot, therefore, be a satisfactory explanation either for the general diffusion of Greek-style medicine through the Roman world or, especially, for the increased social and legal status that Roman physicians enjoyed starting with the fall of the Republic.

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<sup>471</sup> Haberling argued that the medical corps became formalized during the reign of Augustus, a dating with which Davies and Israelowich have agreed. Using more diverse base of evidence, Wilmanns 1995 places the expansion and standardization of the corps more plausibly in the second century CE. Haberling 1910, Davies 1970.

<sup>472</sup> See Rémy 2010, 31 for a breakdown of the chronology of inscriptions in his corpus by province.

The high frequency of *ingenuus* status and Latin gentilicial names, along with the low representation of freedmen and *peregrini* among the military physicians attested in inscriptions, also suggest that significant changes in the perception and social status of Greek-style physicians had already taken place before the Roman military began to employ medical professionals regularly. The presence of a self-proclaimed Asclepiadian doctor (Rémy 1984 Gaul 3 = Rémy 2010 no. 27) in Vienne in the first century suggests that trends in civilian medicine in Rome may have had some influence over the provinces, as does the roughly contemporary attestation of a public doctor of Colonia Patricia Corduba in Baetica.<sup>473</sup>

The much-repeated hypothesis of the Roman military network acting as a vector for medicine thus only seems valid for the limited areas of the Empire in which it was the military camp, and not the municipality, that served as the dominant regional institution from around the start of the second century CE. The Greek-speaking provinces of the East already had an entrenched medical culture and, presumably, a number of local physicians who were more skilled than those brought in by the military. On the other side of the empire, the Iberian provinces and Gaul seem to have been influenced by Italian civic models and trends that circulated in the first century CE, before Roman military medicine began to emerge as a formal and permanent institution. Like their eastern counterparts, the more densely populated parts of these provinces would not have found much new or worth emulating in military medicine, if they encountered it at all.

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<sup>473</sup> Rémy Iberia 10 = Rémy 2010 no.14.

### **III. Military healthcare in its broader context: individual health and the Roman state**

I argue above that Roman military healthcare was more circumscribed and had less of an effect on the Roman civic sphere than has sometimes been suggested, even outside Italy. Like the authors of two previous revisionist studies I agree with and have cited above — Baker on how the Roman military medicine was not as internally standardized as it has frequently presented, and Koloski-Ostrow on how the sanitary infrastructure of Roman military camps did not cause but rather followed analogous development in the civilian sphere — I have argued that the influence of the military over Roman civilian medicine has frequently been overstated, and has masked subtler ways in which ideas about health traveled through the Roman world.

This does not mean, however, that the provisions made for the health of members of the Roman military did not constitute an important facet of the broader Roman understanding of public health and the responsibility of the state for the physical health of citizens. Rather, the unique and limited nature of state-funded healthcare within the Roman military makes it all the more notable. There is no evidence suggesting that free, regulated healthcare was ever available to legislators, for example, or to magistrates, let alone to average citizens (or non-citizens, for that matter).<sup>474</sup>

#### *a. Exceptional bodies and the Roman state*

Aside from enormous differences in the state of medical science, the Roman imperial state's lack of provision for civilians is perhaps the greatest way in which in the relationship

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<sup>474</sup> Pliny the Younger on medicine: letters 6-10, in which he asks Trajan to grant special privileges to a medical practitioner he had employed while sick, suggest that Pliny hired and paid for his healthcare practitioners on his own.

between healthcare and the state in the Roman world differed from those in modernity. Especially in the twentieth century, governments at war devoted vast resources to civilian health. These efforts are well evidenced thanks not only to administrative records, but also due to the enormous amounts of propaganda connecting the physical health of civilians (and not just soldiers) with the physical health of the state produced by, for example, the USSR, the United States, Fascist Italy, and Nazi Germany, all of which invested heavily in civilian-focused public health messaging on the homefront during the Second World War.<sup>475</sup>

In large part, the high level of resources poured into modern public health (which involves *all* citizens, not only soldiers) has been tied to advances made in medical science in the late nineteenth and early twentieth centuries. The development of germ theory, polio and smallpox vaccinations, and antibiotics fundamentally and permanently changed the relationship between human and pathogen, and allowed biomedicine to become a true science for the first time in human history. In short, as medical science improved and physicians began to be held to high objective standards both internally and by outside entities, access to medical care simply became more strongly correlated with better health outcomes than was ever the case in Rome or any other pre-twentieth century society. In a world where medicine was unregulated and based on faulty premises in the first place, as in Rome, increased access to physicians would not necessarily have translated to less disease, disability, and death.

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<sup>475</sup> E.g., USSR: Starks 2009; United States: Byers 2015; Fascist Italy: Gori 2004; Nazi Germany: Smith 2004.



Just as the growth of modern scientific knowledge alone cannot fully explain differences among public health systems of the nineteenth and twentieth centuries, however, the lack of that knowledge does not sufficiently explain the specific decisions the Roman state made in terms of which health resources were allocated and to whom. While plenty of Romans doubted the value of Greek-style medicine, none of them ever had the benefit of knowing how wrong they were about the way human bodies and diseases work, or that it was even possible for medicine to ever become as standardized and reliable it is today. More generally, the state of medical science at any point in history does not neatly correspond to the degree to which states have directed resources toward securing healthcare for individual citizens, with an obvious example being the extreme variation in national single-payer healthcare programs today despite the relatively uniform level of medical science and quality of care available in wealthy countries around the world. As in that case, a politically-rooted explanation for the shape of public health activity in imperial Rome is crucially important and worth articulating.

While the imperial Roman state seems to have cared about collective health in a general sense, and did invest some resources in it by attempting to improve urban environmental conditions and facilitating the growth and spread of medicine as a profession in the western Mediterranean, directing state resources toward ensuring the physical health of any individual (including his/her access to healthcare) never seems to have been a factor except for members of certain very limited groups. The military — including urban regiments like the Praetorian Guard — is one such group, even if the care its members received was less uniform and sophisticated than has been suggested. Another is the imperial family, which I discussed in a previous chapter; in addition to soliciting the

best available medical care providers, this small group of individuals was also regularly the object of state-organized prayer specifically targeted at their health.

Two further groups are worth mentioning as the likely recipients of free healthcare paid for by the imperial state, though there is little that we can concretely say about the specifics in either case. The first group consists of the religious figures most intimately associated with the state, the Vestal virgins. The second is the large body of slaves owned directly by the state, which included individuals as different as upper-level technocrats (the true *servi publici*) and gladiators (who, as *servi poeni*, were just as much the property of the Roman state). The evidence for the relationship between the healthcare of the Vestal virgins and the Roman state is not substantive enough to permit reconstruction of its specifics, but the two relevant textual sources recently discussed in an article by Ákos Zimonyi do suggest that it was formally overseen by the imperial administration.<sup>476</sup> The first of these sources is a 368 CE law of Valentinian I regarding the establishment of *archiatri* in each *regio* of the capital, which mentions the Vestals as one group that already enjoyed the services of such a physician.<sup>477</sup>

The term *archiatri*, often translated as public physicians, clearly comes from the Hellenistic tradition of *archiatroi*. Like these doctors, the *archiatri* of Valentinian's Rome did not constitute anything like a modern single-payer healthcare system: there were far too few of them to treat the entire citizen body, and they did not treat patients for free. Rather, the salaries they drew from the civic administration were intended to supplement

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<sup>476</sup> Zimonyi 2015.

<sup>477</sup> The other preexisting *archiatri* were those of the port and the *xystos*. CT 13,3,8. See Nutton 1977, 208-210.

the small fees paid by poor citizens. The text of the law does not make it clear whether or not the *archiatrus* of the Vestals operated in the same way as those of the different civilian *regiones* — i.e., as a less expensive but not free healthcare option to be sought out and paid for at the patient's discretion — or whether he would have been fully responsible for overseeing the Vestals' health and fully paid by the Roman state, not his patients. It also gives no hint as to when the office of *archiatrus* to the Vestals was created.

The other source considered by Kimonyi, a letter of Pliny the Younger, does not mention any such physician charged with treating ill Vestals. In the letter, Pliny describes the aftermath of the illness of a Vestal named Junia, who was sent to the private home of Pliny's friend (and Junia's relative) Fannia to recover. Pliny writes,

The illness of my friend Fannia gives me great concern. She contracted it during her attendance on Junia, one of the Vestal virgins, engaging in this good office at first voluntarily, Junia being her relation, and afterwards being appointed to it by an order from the college of priests: for these virgins, when excessive ill-health renders it necessary to remove them from the temple of Vesta, are always delivered over to the care and custody of some venerable matron.<sup>478</sup>

Pliny's narrative mentions no dedicated, *valetudinarium*-like facility for the Vestals, nor any provider of healthcare beyond Fannia herself. As a wealthy *matrona*, Fannia may have had access to the medical knowledge available to elite Roman men in the first century CE, but she certainly would not have been trained or employed as a professional *medica*; it is likely that her responsibility for Junia's health may have included not only providing her with a place to recover, but also hiring and overseeing a professional physician.

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<sup>478</sup> Pliny the Younger, ep.80 to Priscus

Whatever the specifics of the healthcare of the Vestals, its provision seems to have been unique in Roman religious administration, and not available to other religious officeholders. One potential reason for the special treatment is gender — in the sense that women’s medical care was supposed to be arranged by a male guardian — although a benefit of the Vestals’ office was an exemption from the normal legal and financial restrictions placed on Roman women. Also worth considering is that the Roman state took a special interest in determining the healthiness of each Vestal virgin as early as her candidacy for the position, at which point she would have been a child. As Morgan notes, this concern with Vestals’ health did not end with their induction into the office. The Vestals were one of only two types of Roman religious authorities that needed to be in full physical health in order to perform their offices, and (like Junia) were temporarily removed from duty when they fell ill.<sup>479</sup> Parker understands this focus on the Vestals’ health to be an expression of their religious function, much like the requirement of virginity and the extreme state responses to Vestals accused of in chastity, which included execution by being buried alive.<sup>480</sup>

The second group, that of public slaves, is even more nebulous. The cultural norms for the healthcare of private slaves is relatively well attested; as part of the *familia*, slaves owned by individuals were the responsibility of the heads of households. The most frequently cited pieces of evidence for Roman slave healthcare suggest that a significant number of slaves received only minimal care, if that. In his *De agricultura*, Columella

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<sup>479</sup> Morgan 1974. The others are augurs, although the evidence for exactly what this meant is thin.

<sup>480</sup> Parker 2004.

mentions sending slaves too ill to work to a *valetudinarium* located on the estate, where they could rest and receive medical attention.<sup>481</sup> Columella does not note who would provide this treatment, however, or whether it would have consisted of Greek medicine or folk practices. Writing in the second century BCE, Cato the Elder notes that he recommends simply selling a sick slave rather than nursing him or her back to health.<sup>482</sup> This callous attitude seems to have endured at least into the first century CE, when a Claudian law attempted to dissuade slaveowners from the practice by granting immediate and irrevocable freedom to any slaves abandoned due to age or sickness.<sup>483</sup>

Cato and Columella clearly referred to agricultural slaves, whose utility and value lay entirely in their physical capabilities. While the Claudian law does not specify which types of slaves had been abandoned in this way, it is clear that not all would be vulnerable to this kind of abuse, especially those whose duties required them to be literate. Two letters of Pliny the Younger shed some light on the treatment of upper-stratum slaves and freedmen by a more scrupulous owner, albeit still a private one. In one, he sends his reader *Encolpius* to a friend's countryside estate to recover from an illness.<sup>484</sup> In the other, Pliny worries about his sick freedman *Zosimus*, suggesting that he felt a responsibility for the man's health even after his manumission.<sup>485</sup>

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<sup>481</sup> Columella *De agricultura* 12.3.

<sup>482</sup> Cato *De agricultura* 2.7; Plutarch *Cato major* 4.4.

<sup>483</sup> Suetonius *Claudius* 25 and Dio Cassius 60 (61), 29.

<sup>484</sup> Pliny the Younger, ep.86 to *Septitius*.

<sup>485</sup> Pliny the Younger, ep.56 to *Paulinus*.

Another example of the high quality of medical care available to the most elite slaves and freedmen comes from a funerary inscription from Rome belonging to Musicus Scurranus, a freedman of Tiberius who worked as an imperial *dispensator ad fiscum* in Lugdunum after his manumission.<sup>486</sup> The inscription inventories the freedman's own slaves, one of whom was a doctor named Agathopus. With his own slave doctor of presumably Greek origin, Scurranus's healthcare as an imperial freedman would have closely resembled that of an elite, freeborn Roman citizen. Of course, as an exceptionally powerful *libertus Caesaris*, he was not a *servus publicus*. It is also unclear how healthcare would have worked for his under-slaves – would Agathopus have treated them as well?

For the imperial public slaves who performed mid-level administrative duties, neither extreme represented in the evidence for private slaves and freedmen — utter neglect or the dedicated attention of a skilled professional — seems very likely. Positive evidence for what sort of medical care this class of Romans might have received is extremely scanty, however. One inscription from Rome does provide a narrative of a public slave who became ill and was treated by professional doctors, but the details of who sought out and paid for the doctors are impossible to reconstruct.

Felix Asinianus, the public slave of pontiffs, has fulfilled the vow to Bona Dea Agrestis Felicula willingly and sincerely, sacrificing a white heifer for the recovery of sight. He was healed, after having been given up by doctors, after ten months of taking medicines, through the kindness of the mistress; through her everything was restored during the ministry of Cannia Fortunata.<sup>487</sup>

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<sup>486</sup> ILS 1515 = CIL VI 5197; Gummerus 23.

<sup>487</sup> CIL VI 68 = Gummerus 3. "Felix publicus Asinianus pontific(um) Bonae Deae agresti Feliculae(?) votum solvit iunicem albam libens animo ob luminibus restitutes, derelictus a medicis post menses decem beneficio dominae medicinis sanatus. Per eam restitute omnia ministerio Canniae Fortunatae." (trans. Takács)

The ten months of medical care Felix received at the hands of multiple doctors cannot have been inexpensive. It is impossible to tell who actually paid, however, or who these doctors were. Felix seems to have undertaken the vow to Bona Dea and the cost of the sacrifice himself; was he also responsible for soliciting and paying his own private doctors? Did the *pontifices* he served do so for him? Or, finally, were the doctors who treated him part of a group of physicians specially charged with treating public slaves?

The evidence for gladiators, who as *servi poeni* were technically a type of public slave, lends some credibility to this last possibility. Famously, Galen himself was a physician to gladiators before he treated the imperial family. While he then accompanied the emperors on campaign, Galen was never a “military doctor” in the sense of being stationed at a garrison and responsible for the treatment of ordinary soldiers.<sup>488</sup> The transition from gladiator doctor to imperial physician was not as dramatic a leap as it might appear on first glance. In the Greek east, where gladiatorial games were ostentatiously Roman, they were closely linked to the imperial cult, and indeed it was the high priest in charge of the imperial cult for the entire province of Asia who solicited Galen for the position.<sup>489</sup>

Another notorious sentence for penal slaves was hard labor in the imperial mines. The funerary inscription of Marcus Aerarius Telemachus, a freedman doctor from Corduba,

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<sup>488</sup> Though only one data point, Galen’s career trajectory suggests that physician to the gladiators was more prestigious a position than army doctor – both more attractive to highly-educated candidates and more likely to propel one’s career to the very highest levels.

<sup>489</sup> Cf. the letter of Hadrian to Aphrodisias discussed in Chapter 3, in which the provincial governor and the emperor himself intervene in a civic conflict surrounding the allocation of funding for gladiatorial games and an aqueduct.

provides another possible data point for the healthcare of this subset of public slaves.<sup>490</sup> As his gentilicial name suggests, before his manumission Telemachus was the property not of an individual but of the *aerarii*, in this case a society of *publicani* who oversaw the copper mines near Corduba. Two important aspects of Telemachus's career are unclear: first, whether he would have treated the slaves themselves, or only the free *publicani* who oversaw them, and second, whether Telemachus was trained to be a physician while a slave or was made a slave having already received a medical education.

While many aspects of the medical care of soldiers, Vestal virgins, and public slaves remain obscure, there are certain connections we can draw between each of these groups and the imperial administration. The bodies of soldiers, Vestals, and public slaves were all connected to the wellbeing of the imperial state as a whole, whether physically or spiritually. This connection allows for an easy conceptual leap to the responsibility of the state for their healthcare. But what about the general citizen body? Pliny the Elder's quotation of Cato the Elder's warning to his son against subjecting his body to Greek medicine suggests that individual male citizens' health may also have had this type of symbolism at an earlier period in Roman history. During the Republic, at least before the reforms of Marius and the shortage of manpower that precipitated them, the young free men of Rome *were* the state: they were its soldiers, its voters, and some of them were its future senators and magistrates. Their physical health not only influenced Rome's chances of military success, but also, as discussed in Chapter 2, functioned as a barometer of the *pax deorum*.

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<sup>490</sup> CIL II(2) 7 34; Rémy 2010 no. 12. "Marcus Aerarius, societatis aerariorum libertus, Telemachus <*sic*> medicus. Hic quiescit. Vale."



While great meaning was connected to individual citizen health in the Republic, Greek medicine and Greek doctors, with the exception of Archagathus's short tenure as city doctor, were not fully embraced by the Roman state until after the collapse of that form of government. The factors that allowed the political revolution of the first century CE — including the forcible removal of legislative power from a small number of traditionally powerful families and the development of a Mediterranean-wide, non-ethnic conception of Romanness — allowed Greek medicine to move closer to the Roman state than ever before.

Those same factors also weakened the symbolic importance of the health of ethnically Roman, freeborn citizen bodies (an importance that the bodies of Greeks, slaves, and other non-citizen Romans never would have had in the first place) to the functioning of the state. This drop in the power of the individual ethnically Roman body, and in the body of the individual civilian, is reflected in the end of the interpretation of epidemics as political crisis, at least until the Plague of Cyprian. Simply being a Roman citizen was no longer enough to link the health of an individual's body to the fortune of the state. The only individuals whose physical health the empire's security required were now a) the emperor himself (along with his heir), and b) the members of the military, many of whom were not citizens themselves. Resources were therefore directed toward the healthcare of these groups, along with that of the Vestals (whose bodies retained symbolic power) and, perhaps, that of the slaves owned by the state itself.

## Conclusion: Constants and Variables in Roman Public Health

This dissertation has argued that the start of the Julio-Claudian dynasty marked the birth of a new Roman idea of public health as a state responsibility, which remained essentially stable in imperial ideology until the end of the second century CE. On a more basic level, I also argue that the emergence of this specifically Roman Imperial concept of public health at the start of the Principate was fundamentally a political phenomenon, and not a technological or scientific one. In this final chapter, I offer two complementary concluding summaries. The first provides a synchronic description of four major factors that determined the range and types of possible public health-related actions the Roman state could take throughout the entirety of my period, c.300 BCE – c.235 CE. The second offers a diachronic narrative emphasizing how historical circumstance influenced the collective Roman understanding of public health, and determined why the Roman state took the health-related actions it did at the specific moments it did.

### **I. Identifying Constants in Roman Public Health**

This dissertation began with an excerpt from a public health textbook that focused synchronically on the technological and institutional tools of Roman public health (sanitation, aqueducts, army doctors, etc.). Those tools are all important facets of this history, but the story is incomplete without taking into consideration more abstract questions: who proposed, implemented, and paid for them and why? Here I propose a

number of ideological “constants” that persisted throughout and shaped the history of Roman public health regardless of political circumstance.

*Constant 1. Transactional religion is a fundamental part of the pre-Christian Roman state.*

The Romans had no concept of the separation of church and state, but they did distinguish between state gods and non-state gods. The Capitoline triad of Jupiter, Juno, and Minerva were central to Roman state religion from time immemorial and remained the quintessential state gods as long as Roman state gods existed, although other deities were absorbed into the state pantheon.<sup>491</sup> It was the gods of this pantheon that guaranteed the *pax deorum* and therefore were the most frequent beneficiaries of the expiations prescribed by the Republican Senate, regardless of whether the portent in question was an epidemic or something else.

The procedural and transactional nature of Roman state religion did not prevent religious experimentation, as we have seen in the context of Republican epidemics. This experimentation itself, however, had to follow its own protocol – in the cases of the importation of Asclepius, the invention of the *lectisternium*, and others, the new practice had to be prescribed by a state religious authority, whether a *quindecemvir sacris faciundis* or a *haruspex*. Deviation from this program, as in the case of the pestilence in 365, could be treated as a further religious transgression against the state gods that needed its own expiation.

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<sup>491</sup> In the Republic, these included early-arriving Greek gods like Apollo and Hercules, as well as deified abstract concepts like Fortuna and Salus.

While it is perhaps clearest in the Republican evidence, the hierarchical but reciprocal relationships among the state gods, the government, and the Roman *populus* lasted until the final triumph of Christianity. The universal sacrifices ordered by Decius during the Cyprianic Plague are obvious evidence of the existence of divine-state-citizen reciprocity in the late third century CE, but even during the long stretch of time that saw no epidemic-related expiations it was a constant feature of Roman state religion. The annual *vota* citizens performed to the state gods asking for the *salus* of the emperor are a clear example of how the concept found expression in the Principate, especially in light of Pliny the Younger's descriptions of them in his *Panegyric*. Regarding the vows made by citizens, he says that "everyone's prayers were for your [Trajan's] *salus* alone, since each man knew they would be answered for himself and his children if they were granted for you!"<sup>492</sup>

Pliny's description of how the vows made by the Senate that year differed from those made for previous emperors is even more illuminating about the literal and legalistic way at least one Roman understood the overlapping bonds of reciprocal responsibility that tied gods, citizens, Senators, and the emperor together:

We were accustomed to offering vows to ensure the eternity of the empire and the *salus* of the emperors, or, rather, the *salus* of the emperors and thereby the eternity of the empire. But in the case of our present emperor, it is worth noting the wording of these vows, and the clause "if he has ruled the State well and in the interests of all"...At your instigation, Caesar, the State has struck a bargain with the gods that they shall preserve your health and safety as long as you do the same for everyone else; otherwise they are to turn their attention from protecting your life.<sup>493</sup>

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<sup>492</sup> Pliny, *Panegyricus* 23.5: "Ut in unius salutem collata omnium vota, cum sibi se ac liberis suis intellegent precari, quae pro te precarentur!"

<sup>493</sup> Pliny, *Panegyricus* 67.4-5: "Haec pro imperatore nostro in quae sint verba suscepta, operae pretium est adnotare: 'Si bene rem publicam et ex utilitate omnium'... Egit cum dis

Pliny stresses that Trajan was unusual for insisting that the *vota* made at his inauguration include a stipulation that he as emperor was as responsible for the wellbeing of his citizens as the gods were for his own, and he may well have been the only emperor to articulate this idea so literally. The structure of the network of obligations, however, reveals the degree to which the political revolution of the fall of the Republic was reflected in Roman state religion. While the treatment of epidemics as prodigies is evidence that the state gods were understood to have direct control over the health of Roman citizens during the middle Republic, starting with Augustus the person of the emperor serves as intermediary. Though a significant change, it ultimately relies upon the same permanent and fundamental principle of Roman state religion: that of a mutually beneficial relationship with a defined set of gods, dependent on obligatory ritual transactions.

*Constant 2. Aqueducts always have a political dimension.*

The ambivalence Rome's ruling class felt toward large-scale infrastructure projects is exemplified by a legend about the origin of Rome's first major public works project, the Cloaca Maxima.<sup>494</sup> Running through what would become the political center of the low-

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ipso te auctore, Caesar, res publica, ut te sospitem incolumemque praestarent, si tu ceteros praestitisses; si contra, illi quoque a custodia tui capitis oculos dimoverent teque relinquerent votis."

<sup>494</sup> While the archaeology of the Cloaca Maxima (and the early Forum more generally) does suggest that the first phase of the drain's construction does indeed date to the Archaic period, it should go without saying that the historical narrative provided by Livy is at best a romanticized version of the political conditions of the period filtered through centuries of oral and written transmission, intentionally or unintentionally contaminated with bits of other stories, and filtered through Livy's Augustan-era worldview.

lying city, this celebrated drain literally turned the Forum from a swamp into a functional piece of land. According to Livy, however, it was not a native Roman project but was conceived and completed by two foreign kings.<sup>495</sup> While the project's architect, Tarquinius Priscus, was a respectable figure, the drain was actually completed by his son (or grandson) Tarquinius Superbus. Depicted as a murderous tyrant who pressed free Romans into constructing the Cloaca Maxima, Tarquinius Superbus was the final king of Rome: he was overthrown by members of a nobility who became the Republican Senate.

This story works as a sort of parable about the elite Roman view of public works in general: they have the potential to materially improve life for all Romans, but they require such an investment of money and labor that any individual capable of completing such a project must also be capable of becoming a tyrant. Outside of the capital, the construction of drains, aqueducts, and other large public works does not seem to have inspired fears of monarchy, but instead served a way for local elites to display their wealth and standing in a socially appropriate manner. This too is a political message, and the connotations of civic power that came with constructing an aqueduct in particular must have grown even stronger with the start of the Principate, when only emperors built new aqueducts in the capital.

*Constant 3. Professional medicine is always a fundamentally Greek trade.*

Professional medicine was a normal part of the Roman world as early as the second century BCE, but the degree to which it was formally associated with, recognized by, and made use of by the Roman state depended on the position of Greek culture with respect to

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<sup>495</sup> Livy 1.38.6 and 56.2.

the empire. A helpful analogy from the religious world is the office of haruspex: though officially associated with the Senate by the third century BCE, when they began to regularly appear in annalistic sources as interpreters of prodigies,<sup>496</sup> the practice of haruspicy was considered culturally Etruscan for centuries after Etruscan culture had been fully absorbed by Rome.<sup>497</sup> This seems to have been the case regardless of the actual ethnic background of the haruspices. While the most prestigious ones do seem to have claimed Etruscan heritage into the Late Republic and later,<sup>498</sup> it is unlikely that all of the legionary haruspices attested epigraphically as late as the third century CE and as far from Rome as North Africa could have done so.<sup>499</sup> Still, they would have considered themselves students of an Etruscan art that had long been used as a resource by the Roman state.

Compared with the absorption of haruspicy into Roman religion, the integration of Greek culture into the Roman state happened during a period for which there is substantially more evidence about the range of attitudes Romans, or at least elite Romans, held toward specifically Greek cultural institutions including but not limited to medicine. As discussed in a previous chapter, Cato the Elder characterized Greek physicians as a threat to the physical health of young, male Roman citizens and consequently to the literal strength of the Roman state in the second century BCE. Pliny the Elder's diatribes against professional Greek medicine are evidence that this suspicion persisted into the late first

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<sup>496</sup> MacBain 1982, although Livy claims that Etruscan haruspices were regularly consulted by the Roman state during the monarchy at 1.56.4.

<sup>497</sup> Cicero makes it clear that haruspicy is an intrinsically Etruscan art throughout *De Divinatione* and especially at 1.41.92-3.

<sup>498</sup> Rawson 1978.

<sup>499</sup> CIL VIII 2567; 2586; 2809.

century CE. Between the lifetimes of these two writers, however, the Roman state had begun to treat Greek medicine as a valuable resource of the Empire and to recognize practitioners of the art both individually and collectively.

The persistent Greekness of professional medicine in the Roman world is attested by a diverse array of sources. The prosopographical evidence suggesting that a majority of practitioners were ethnically Greek is certainly relevant. Although of course not all physicians had Greek ancestry, the most celebrated (including nearly all of those recruited to treat the imperial family) did. At least equally as important is the stability of medical cultural narratives from the Hellenistic period until late antiquity. In histories of the field, Hippocrates is without exception described as the human inventor of medicine as a profession; the gods Asclepius and less frequently Apollo are always its patrons.

At least until Caracalla visited Pergamon and invented the idea that an emperor could access the god directly without the intercession of a professional doctor or priest, the Roman state displayed a remarkable knowledge of and sensitivity to the cultural heritage of Greek medicine. Starting with the privileges granted by Julius Caesar and Augustus, Roman state actors used the tools of empire to encourage the growth of the profession without attempting to make it any less Greek. The exemptions from taxation and *munera* given to doctors in Greek cities of the East, for example, in essence meant that those doctors had to conform to the new financial and behavioral expectations imposed by the Empire to a lesser degree than did their socioeconomic peers. Another manifestation of the relationship between the Roman state and Greek medical culture is exemplified by the immunity granted to the residents of Cos in honor of Claudius's doctor Xenophon, a native of the island. Although Tacitus complains that tying the grant of immunity to the medical



skill of one resident demeaned the other achievements of the Coans, his own representation of Claudius' speech announcing the privileges serves as a tidy example of how the Roman state could acknowledge and cultivate Greek medicine as an imperial resource while still emphasizing its intrinsic Greekness:

"The earliest occupants of the island had," he said, "been Argives... then the arrival of Aesculapius had introduced the art of healing, which attained the highest celebrity among his descendants" — here he gave the names of the descendants and the epochs at which they had all flourished. "Xenophon," he observed again, "to whose knowledge he himself had recourse, derived his origin from the same family; and, as a concession to his prayers, the Coans ought to have be exempted from all forms of tribute for the future and allowed to tenant their island as a sanctified place subservient only to its god."<sup>500</sup>

By framing the privileges within the context of the worship of Asclepius, Claudius, with his typical cultural sensitivity, not only acknowledged the fundamental religious aspects of Greek medicine but also emphasized the location-specificity and non-Romanness of Asclepius and his worshippers. In other words, even in a case in which a Roman emperor desired to recognize Greek medicine as a valuable resource of the Empire, he reinforced its foreignness.

*Constant 4. Public health concepts and technologies are incubated and circulated in the civic sphere.*

While the previous three “constants” are, essentially, uncontroversial statements about Roman ideology even if they are not often applied to questions of public health, this final

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<sup>500</sup> Tacitus, *Annales* 12.61: “Argivos... vetustissimos insulae cultores; mox adventu Aesculapii artem medendi inlatam maximeque inter posteros eius celebrem fuisse, nomina singulorum referens et quibus quisque aetatibus viguissent. quin etiam dixit Xenophontem, cuius scientia ipse uteretur, eadem familia ortum, precibusque eius dandum ut omni tributo vacui in posterum Coi sacram et tantum dei ministram insulam colerent.”

one runs contrary to the standard narrative that identifies the military as the engine driving the generation and circulation of new medical and sanitary concepts and technologies through the Roman world. As discussed in Chapter 5, the growth of the military medical corps and the application of sanitary technology in military camps both seem to have happened too late and in too isolated regions to have had any real effect on the wider Roman world during the Principate. While the free medical care provided to each of the roughly 350,000 members of the Roman military was indeed something original, it seems that the individual health-related technologies and techniques applied in the military followed the lead of the civilian world rather than the other way around.

One notable example of the way health concepts, practices, and technologies could travel via the civic and not military networks of the Roman empire is the correspondence of Pliny the Younger and Trajan regarding the uncovered drain in the city of Amastris. Pliny's ability to secure funding for and commission a sanitary engineering project were, of course, the results of his position in the imperial administration. His ability to communicate his revulsion at the drain, however, relied on a shared, culturally specific idea of what a city in the Roman Empire ought to look like. As the increased connectivity of the empire facilitated the movement not just of soldiers but of people of all classes (except perhaps the agricultural), the urban network of the empire would have allowed those who traveled it to compare practices in different cities, and to pass on that knowledge to people who did not. Furthermore, the construction of Roman-style sanitary infrastructure in places that did not yet have it would have been an enormous opportunity for local elites to compete with each other energetically, something that the urban network would have amplified by facilitating

the movement of architects and laborers skilled in constructing drains, aqueducts, latrines, and other sanitary structures.

The Roman state encouraged a specific vision of the healthy city in other ways, as well, including the above-mentioned special privileges awarded to doctors in the cities of the eastern provinces. While some have attributed the increase in number and status of known physicians in the early empire to a growing need for them in the military, at least in the East the prospect of gaining entrance to a privileged class in one's hometown would likely have been a far stronger incentive to enter the medical field than would signing up as a military doctor and being stationed potentially far from home.

## **II. Roman Public Health: A preliminary diachronic narrative**

### *a. Public health and the Roman Revolution*

The secular tools of public health available to ancient societies – most prominently professional physicians and aqueduct technology – had existed in Rome for quite a long time before Augustus consolidated his power: at least two centuries in the former case, and three in the latter. The ambivalence and, at times, animosity that the Roman state showed toward professional physicians in the Republican period can largely be explained by Greek-specific xenophobia (itself something of a political tool itself during the first few centuries of Roman imperial expansion). The highly erratic nature of the expansion and upkeep of Rome's aqueduct system, too, had a political cause: the lack of any permanent, institutional commitment was an organizational problem that arose from the competitive, suspicious, and jealous nature of Roman Republican politics. To build an aqueduct was a powerful (and

therefore dangerous) political gambit that could imply ambitions of kingship; to repair a damaged one bearing another man's name was politically useless.

While the Republican senate denied responsibility for Rome's water, it did take action in the face of certain epidemics. This, too, reflects an understanding of the relationship between citizens' health and the state that was firmly grounded in a particularly Republican way of thinking. As discussed over the course of Chapter 2, the outbreaks of disease that became matters of state were not thought to have been due to natural causes. Instead, they were understood to be supernatural punishments inflicted upon the *res publica* in retribution for the misdeeds of the public (or, rarely, for the misdeeds of a subset of exceptionally important citizens, such as the alleged in chastity of Vestal Virgins). Ultimately, the core intention that underpinned such expiations was not to protect the health of Roman citizens *per se*, but rather to convince the state gods to resume their cooperation in the Roman project. The magico-medical thinking that underpinned religious expiations of portent-epidemics by no means ended with the Republican mode of government. Instead, the changing political, demographic, and geographic conditions of the late Republic and early Principate led to the end of this practice as an official reaction to epidemic disease – or, in other words, as a public health policy.

The legal, physical, and symbolic reforms undertaken by Julius Caesar and especially by Augustus permanently reshaped the relationship between the Roman state and the collective health of its citizens. To a certain extent, this changed relationship must have had an actual impact on the health of Romans living in the capital: after Agrippa's aedileship, securing clean water with which to bathe or cook would have been significantly easier for many Romans, and especially those living in the previously underserved area of the

Aventine. Similarly, while the real impact on a citizen's health may have been arguable, it certainly would have been easier for an average resident of Rome to visit a professional physician following Caesar's grant of citizenship to doctors living and practicing in the city. More dramatic, however, would have been the intangible but pervasive and radical changes in the relationship between the Roman state and health. I see two fundamental reasons for these changes, namely the geographic expansion of the empire and the symbolism of the person of the emperor.

### *i. Expansion of the empire*

Until the middle of the second century BCE, the Roman state was roughly synonymous with the city of Rome despite ever-growing numbers of citizens and magistrates outside the city walls. It was precisely this geographical limitation that made epidemics within the city such potent candidates for interpretation as portents from the state gods. By the time of the Battle of Actium, this was far from the case. Free residents of the empire would not enjoy universal citizenship until 212 CE, but a network of Roman citizens and magistrates spanning across the Mediterranean world had already been firmly in place for more than a century before the Republic fell. This diffusion of shareholders in the *res publica*, along with the increasing numbers of residents of the city of Rome that were not citizens or culturally Roman, essentially neutralized the concept of a disease outbreak in the city as a referendum on the relationship between the gods and the state. Indeed, when the prodigy-expiation model appears to have been revived during the Plague of Cyprian, Decius' edict applied to all residents of the empire, regardless of location or citizenship status.

The Antonine Plague here stands out as an anomaly: why would a devastating pandemic not have triggered a similar response in the second half of the second century? I see three possible (and not mutually exclusive) explanations for the lack of a state religious response to this pandemic: first, the Antonine Plague did not afflict the entire empire in one fell swoop, but traveled in clear waves from east to west. In other words, while the plague may have devastated the entire empire over a span of many years, at any one point in that span it would have impacted only limited geographical areas. Second, the popular etiology of the plague as Apollo's punishment for the impiety of a soldier in Seleucia on the Tigris, along with the prevalence of epigraphically attested oracular consultations, shows that a religious explanation certainly carried a good deal of weight at this point, but this was not an explanation that implicated the emperor, the state at large, or the general citizen body. And finally, while Christianity certainly existed in pockets of the empire in the latter half of the second century, it was not yet seen to pose a significant enough threat to the supremacy of the traditional Roman state pantheon to trigger a state religious revival.

Another consequence of the geographical spread of the empire was a change in Roman attitudes toward medical practitioners and ideas of foreign origin. Here, the official opinion of the state seems to have lagged behind that of the citizen body. Greek doctors were already common in Rome in the second century BCE. When Asclepiades of Bithynia arrived in the capital around 100 BCE, he became famous not because Greek physicians as a group were in any way new or unusual, but because his methods distinguished him from the crowds of more traditional Hippocratic doctors that Romans were familiar with. While they do not seem to have faced any opposition or challenge from the state in the late Republic, physicians did not receive any official sanction until the collapse of the Republic.

With the special privileges bestowed on physicians by Caesar and by Augustus, Greek medicine was officially recognized as an asset of the Roman state for the first time since Archagathus, even if some private citizens like Pliny the Elder continued to regard doctors with xenophobic suspicion.

## ***ii. The person of the emperor***

Roman writers of the Principate did not shy from connecting the *salus* of the emperor to that of the Roman state as a whole.<sup>501</sup> Valerius Maximus begins his *Facta et dicta memorabilia*, written during the reign of Tiberius, by doing just that: “Therefore I invoke you to this undertaking, Caesar, surest *salus* of the fatherland, in whose charge the unanimous will of gods and men has placed the governance of land and sea.”<sup>502</sup> More than half a century later, Pliny the Younger wrote a short letter to the emperor Trajan that reads, “We have made our annual vows, Sir, to ensure your *salus* and thereby that of the State, and discharged our vows for the past year, with prayers to the gods to grant that those vows may be always thus discharged and confirmed.”<sup>503</sup> The antepenultimate epigram of

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<sup>501</sup> And even slightly before — in the *Philippics*, Cicero repeatedly describes Octavian as the provider and defender of the *salus* of the state. *Phil.* 3.3, 3.27, 4.4.

<sup>502</sup> Val. Max. 1.1.pr.: “te igitur huic coepto, penes quem hominum deorumque consensus maris ac terrae regimen esse uoluit, certissima salus patriae, Caesar, inuoco...” Trans. adapted from that of Shackleton Bailey.

<sup>503</sup> Plin. Ep. 10.35: “Sollemnia vota pro incolumitate tua, qua publica salus continetur, et suscepimus, domine, pariter et solvimus precati deos, ut velint ea semper solvi semperque signari.” Trans. adapted from that of Radice.

Martial's second book, written several years later, begins, "Caesar, the world's sure *salus*, glory of the earth, | whose wellbeing is our assurance that the great gods exist..."<sup>504</sup>

As discussed in Chapter 2, *salus* had a broader meaning than just physical health, particularly in the earlier part of the period. Health in a medical sense was a part of *salus*, however, just like safety from violence or bad fortune, and the concept of the emperor as the *salus* of the state meant that any illness of the emperor was a state emergency. The physician of the emperor was therefore a hugely important position, and one that could carry high risks. It can be no accident that nearly all of the physicians mentioned in Pliny the Elder's diatribe against the medical profession had close ties to the imperial court. Just as Cato the Elder had warned his son about the threat he understood Greek doctors to pose to individual Roman bodies, which is quoted within the diatribe, Pliny's list of suspect doctors with intimate access to the bodies of the emperors is engineered to raise alarms not only about physical health, but also about the security of the Roman state.

The person of the emperor was not only a passive symbol of the state, but also ensured the *salus* of the Roman people, at least conceptually. To a large degree, the material ways in which the emperor could take concrete action improve his subjects' health depended on location. Within the city of Rome, the person of the emperor was closely connected to the growth and maintenance of the aqueduct system. Augustus's massive reorganization set an example that no emperor could seek to fully replicate, but the smaller expansions and restorations of the city's aqueducts undertaken by nearly all emperors of the Principate ensured that their names were written into the history of the capital's

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<sup>504</sup> Martial, *Epigrams* 2.91.1-2: "Rerum certa salus, terrarum gloria, Caesar, | sospite quo magnos credimus esse deos." Trans. adapted from that of Shackleton Bailey.



unique water infrastructure. While the emperors' improvements to the water system followed the precedent set by the Republican aqueduct builders inasmuch as that they were self-funded and conspicuous, Augustus's creation of the *cura aquarum* ensured a baseline maintenance program that would largely prevent disruptions in the water supply in the capital.

*b. Roman Public Health after the Principate Model?*

The end the Principate model of public health cannot be made to fit as easily into a political narrative as its birth, which neatly matches the collapse of the Republican form of government and the creation of a Principate model characterized by the lack of treatment of epidemic disease as an official politico-religious crisis, the state endorsement of Greek medicine, and an ideological commitment to the construction and maintenance of urban aqueduct systems. Some of the most provocative evidence suggesting a fundamental change in the Roman conception of public health dates to the reign of Caracalla, including that emperor's unprecedented relationship with the medical god Asclepius. On the other hand, Birley's reading of the empire-wide "dis deabusque" oracular response inscriptions — i.e., that they were solicited and disseminated by the emperor himself — would suggest that it was the Antonine Plague that marked the resumption of treating epidemics as state crises, and therefore the end of the Principate model of public health. In the absence of hard evidence for the dating and for the identities of the agents behind the responses, however, this is only a provocative theory.

The increasingly clear picture painted by the evidence for changes in the Mediterranean disease ecology also highlights the Antonine Plague as the start of a new era.

The first of the three major pandemics to hit the late Roman world, it was a brand-new phenomenon created by processes both human (the connectedness of the Roman empire; the Roman military's focus on the eastern borders in the second century) and non-human (pathogen evolution, possibly amplified by a changing climate).<sup>505</sup> The disease continued to re-emerge sporadically around the Mediterranean for a quarter century, something no Roman who lived through the initial outbreak in 165 would have expected. It is primarily for this reason that I date the end of my Principate Model of public health and the beginning of my second transitional period to the time of the Antonine Plague. One isolated devastating epidemic might not have forced Romans to reconsider the ways in which they as a society attempted to safeguard their collective health, but the Antonine Plague was not isolated. The Roman Empire in the mid-second century was a society that no longer had an established procedure for the official and collective acknowledgment and (perceived) amelioration of epidemic disease. Each new outbreak of the Antonine Plague would have been a further stress on a system not equipped to handle it.

Another major relevant development of this period was the movement of the seat of the Roman state's power away from Rome both literally and ideologically. While earlier emperors, including Claudius and Trajan, had been born outside of Rome, Septimius Severus's African birth and strong accent marked him and his sons as unprecedentedly foreign. The Severan dynasty ended with the reigns of Elagabalus and Severus Alexander, both of whom were born and raised in Syria; Elagabalus's devotion to and preference over Jupiter of the Syrian god of the same name scandalized Roman political elites. The turmoil

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<sup>505</sup> The other two are the Plague of Cyprian that started c.250 and the Justinianic Plague of 541-42.

following the Severan dynasty was an opportunity for regional elites to consolidate their own power at the expense of the empire's political unity. By the end of the third century, Diocletian's reforms had officially stripped Rome of its position as administrative capital of the empire.

Just as the growth of the early Roman Empire's geographical reach had a significant effect on the way the Roman state dealt with both epidemic disease and foreign medical professionals in the Principate, the separation of both the person of the emperor and the highest level of the imperial administration from the city of Rome — partially at first, in the late third century, and then permanently when Constantinople was rebuilt in the mid-fourth century — must have had a significant impact on the Roman concept of public health. Reflecting the political structure of the Roman Empire, the Principate model of public health was always simultaneously imperial and municipal: imperial in terms of values (clean water; professional medicine) but municipal in practice (e.g. aqueduct construction and maintenance everywhere but Rome; the bestowal of civic privileges on prominent doctors). Constantinople may have been conceived by what was left of the Roman state as a "New Rome," but it lacked Old Rome's ancient water system, its state gods, and its intrinsic distinctness from Greek culture. The Roman Empire from the mid-fourth century was governed out of a newly built city of Greeks; its emperor and a growing proportion of its residents had converted to a new belief system that did not just require the total repudiation of the old one, but also entailed entirely different understandings of disease, cleanliness, and how state and religious authorities should act in order to secure the public health. The city of Rome would not fall until 476, but the model of public health that

emerged there with the ascent of the Julio-Claudian dynasty became, after a long period of decline, lost for good with Constantine's reforms.

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## Appendix 1. Proposed timeline of Roman public health models.

Republican Model	Before 150 BCE	<ul style="list-style-type: none"> <li>• Constructing aqueducts is politically competitive for Senators; maintenance is neglected.</li> <li>• Epidemic disease among citizens often treated as a state religious crisis by the Senate.</li> <li>• Greek medicine is potentially threatening to citizen bodies, but is not a matter of the state.</li> </ul>
Transitional Period 1	c. 150 – 27 BCE	<ul style="list-style-type: none"> <li>• Aqueduct construction and maintenance slows and stops.</li> <li>• Epidemic disease occasionally treated by public as state religious crisis, but not the Senate.</li> <li>• Doctors receive first special legal privileges.</li> </ul>
Principate Model	27 BCE – c. 160 CE	<ul style="list-style-type: none"> <li>• New aqueducts construction and large-scale maintenance within Rome constructed only in the name of the emperor, following Republican standards in inscriptions; routine maintenance overseen by appointed officials and public slaves.</li> <li>• Epidemic disease never treated as state religious crisis, but the health of the emperor and his family becomes focus of regular compulsory state religious action.</li> <li>• Greek doctors become a special class across the empire; prominent doctors frequently receive public honors; often presented as representative of Asclepius, who is not a state god.</li> </ul>
Transitional Period 2	c. 160 – c. 330 CE	<ul style="list-style-type: none"> <li>• Language used in aqueduct inscriptions changes; aqueduct construction and maintenance in Rome slows.</li> <li>• Repeated outbreaks of epidemic and pandemic disease highlight weakness of Principate Model in this area. The Antonine Plague is not treated as a state religious crisis, but the Plague of Cyprian is.</li> <li>• Caracalla invents a direct relationship with Asclepius that continues to be represented on imperial coins throughout the third century.</li> </ul>
Byzantine Period	After c.330 CE	<ul style="list-style-type: none"> <li>• Christianity replaces traditional state religion and dictates official responses to epidemics as well as the symbolism of the body of the emperor.</li> <li>• Urban hospitals for civilians begin to appear.</li> </ul>

## Appendix 2: Catalogue of High-Mortality Epidemics in the City of Rome, early Republic to the Flavian Period.

1.

Date: 472 BCE

Sources: Dionysius of Halicarnassus 9.40.2

Major features: Pregnant women miscarry and die; public and private religious actions appear ineffective.

Expiation: Execution of Vestal virgin ordered by *manteis*.

2.

Date: 463 BCE

Sources: Livy 3.6-8, Dion. Hal. 9.67.1-2, Oros. Hist. 2.12.2-3

Expiation: Populus ordered by the consuls to perform *supplicatio* in temples.

Major features: Heavy casualties among livestock and humans, especially in the Senate.

Military activity interrupted.

3.

Date: 451 BCE

Sources: Livy 3.32; Dion. Hal. 9.67.1-2, Oros. Hist. 2.12.2-3

Expiation: none described.

Notes: Extremely contagious; agricultural and military impact; too many dead to cremate.

Citizens import unspecified foreign rituals when state response fails; these also fail.

4.

Date: 436-435 BCE

Sources: Livy 4.21.2-6; Oros. Hist. 2.13.11

Expiation: Supplicatio ordered by *duumviri sacris faciundis*.

Notes: Disrupts agricultural and military activity; human and livestock fatalities. Continues into next year, and military action is suspended.

5.

Date: 433 BCE

Sources: Livy 4.25

Expiation: Unspecified, but based on consultation of Sibylline books.

Notes: Heavy mortality. Livestock mentioned. Agricultural impact. State grain relief organized. Political disruption. Sibylline books consulted for the first time.

6.

Date: 428 BCE

Sources: Livy 4.30; Dion. Hal. 12.6

Expiation: none.

Notes: Painful and deadly skin affliction. Agricultural impact and livestock deaths. Not treated as portent, but citizens import foreign rituals, which aediles are ordered to stop.

7.

Date: 412-411 BCE

Sources: Livy 4.52

Expiation: none.

Notes: Political disruption. Agricultural impact. State grain relief. Not treated as portent, but consul Cn. Iulius Mento vows temple to Apollo Medicus.

8.

Date: 399 BCE

Sources: Livy 5.13-14; Dion. Hal. 19.9; Augustine, *CD* 3.17

Expiation: First-ever lectisternium conducted after consultation of Sibylline books by duumviri.

Notes: Human and livestock deaths. Political disruption.

9.

Date: 392 BCE

Sources: Livy 5.31; Dion Hal 13.4.1

Expiation: none.

Notes: Political and military disruption. Both consuls forced out of office by *senatusconsultum*. Casualties among magistrates. Auspices taken, but not treated as portent.

10.

Date: 384-383 BCE

Sources: Livy 6.20-21; Dion. Hal. 13, frg. 4.

Expiation: none.

Notes: Agricultural impact. Political disruption. Not treated as portent.

11.

Date: 365-363 BCE

Sources: Livy 7.1-7.3; Perioch. 7, Oros. Hist. 3.4.1-3; Aug. 2.8.

Expiation: Lectisternium, importation of Etruscan *histriones*, driving of nails into door of temple of Jupiter Optimus Maximus.

Notes: Political disruption. Deaths among magistrates and common people.

12.

Date: 348 BCE

Sources: Livy 7.27.1-2

Expiation: Lectisternium after consultation of Sibylline books.

Notes: Disruption of military activity.

13.

Date: 334 BCE

Sources: Livy 8.17

Expiation: none.

Notes: Political disruption. Auspices taken.

14:

Date: 331 BCE

Sources: Livy 8.18

Expiation: Nail driven into temple door; unclear at whose orders.

Notes: Political disruption.

15.

Date: 295 BCE

Sources: Livy 10.31; Zon. 8.1.4, Oros. Hist. 3.21.7-8

Expiation: Sibylline books consulted, but no information on expiation.

Notes: The pestilence was one of several portents observed that year, and may not have been the (sole) target of the expiation.

16.

Date: 293 BCE

Sources: Livy 10.47; Perioch. 11, Zon. 8.1, Oros. Hist. 3.22-4.5; Plut. *Quaestiones Romanae* 94; Valerius Maximus 1.8.2; Ovid, *Metamorphoses* 15.622.

Expiation: Importation of Asclepius and day of intercession after consultation of Sibylline books.

Notes: Agricultural disruption. Affected city and hinterland. Embassy to Asclepius not sent until 291 because of Third Samnite War.

17.

Date: 266 BCE

Sources: Augustine CD 3.17 and Orosius 4.5.7

Expiation: Shrines restored at order of decemviri after consultation of Sibylline books.

Notes: Deaths of pregnant women and cattle.

18.

Date: 249 BCE

Sources: Periochae 49; Censorinus DN 17.8; Festus 441.3; Schol. ad Hor. CS 8.

Expiation: Ludi Saeculares ordered by decemviri after consulting Sibylline books.  
Notes: No details given about the actual epidemic.

19.

Date: 208 BCE

Sources: Livy 27.23.5-7

Expiation: intercessions at all chapels, ludi Apollinaris.

Notes: Agricultural impact. Not technically a prodigy.

20.

Date: 187 BCE

Sources: Livy 38.44

Expiation: Supplicatio and intercession after consultation of Sibylline books.

Notes: Agricultural impact.

21.

Date: 181 BCE

Sources: Livy 40.19, 26; Obsequens 6

Expiation: Prayers at all shrines, intercessions, and suspension of work for three days throughout Italy following consultation of Sibylline books.

Notes: Agricultural impact. Interruption of military activity. First epidemic expiation to apply outside of Rome.

22.

Date: 180 BCE

Sources: Livy 40.37 1-3, 42

Expiation: Pontifical rolls and Sibylline books consulted, resulting in gilded statues dedicated to Apollo, Salus, and Aesculapius, as well as intercessions for two days in city, market towns, and "places of public resort" involving everyone over 12 years of age.

Notes: Many deaths among magistrates and priests.

23.

Date: 174 BCE

Sources: Livy 41.21.10-13, 42.2.3-7; Obsequens 10, Pliny *NH* 2.99

Expiation: Sibylline books consulted, resulting in one day of intercessions and a vow of two holy days if plague abates.

Notes: Military disruption. Deaths mostly among slaves but also priests.

24.

Date: 142 BCE

Sources: Obsequens 22, Orosius 5.4, 8

Expiation: Supplicatio.

Notes: Epidemic breaks out after hermaphrodite thrown into the sea (possibly another attempted epidemic expiation).

25.

Date: 43 BCE

Sources: Dio Cassius *Roman History*, 45.17.8

Expiation: Reconstruction of the Curia Hostilia.

Notes: Epidemic affects all of Italy. No mention of priestly college involved in interpretation of prodigy.

26.

Date: 22 BCE

Sources: Dio Cassius 54.1.2

Expiation: None

Notes: Agriculture disrupted. No Senatorial action, but popular politico-religious interpretation (the public attributes the epidemic to an imagined Senatorial conspiracy).

27.

Date: 65 CE

Sources: Suetonius *Nero*, 39.1, Tacitus *Annales* 16.13

Expiation: None.

Notes: Epidemic killed people across social class in Rome. No Senatorial, Imperial, or popular response mentioned.

28.

Date: 80 CE

Sources: Suetonius *Titus* 8.3-4, possibly Orosius 7.9, Cassius Dio 66.23.5

Expiation: None.

Notes: No Senatorial or popular response mentioned. Suetonius says that Titus attempted all "human and divine" measures to end the plague without success.



### Appendix 3. Numismatic tables.

a. Number of RIC coin types showing Salus and Asclepius by emperor, 30 BCE – 235 CE

<b>Emperor</b>	<b>Salus</b>	<b>Asclepius</b>
Augustus	0	0
Tiberius	1	0
Caligula	0	0
Claudius	0	0
Nero	6	0
Galba	6	3
Vespasian	21	0
Titus	8	0
Domitian	4	0
Nerva	4	0
Trajan	8	0
Hadrian	71	2
Antioninus Pius	80	4
Marcus Aurelius	95	0
Commodus	36	0
Septimius Severus	14	4
Septimius Severus and sons	6	5
Caracalla sole rule	2	23
Macrinus	28	0
Elagabalus	14	0
Severus Alexander	23	0

b. Individual provincial coin types in the collection of the American Numismatic Society with an imperial family member portrait on the obverse and Asclepius on the reverse, by emperor, 30 BCE – 235 CE.

<b>Emperor</b>	<b>Types</b>
Augustus	2
Tiberius	2
Caligula	0
Claudius	0
Nero	0
Galba	0
Vespasian	0
Titus	0
Domitian	1
Nerva	0
Trajan	0
Hadrian	14
Antoninus Pius	16
Marcus Aurelius	6
Commodus	13
Septimius Severus	18
Septimius Severus and sons	13
Caracalla sole rule	31
Macrinus	0
Elagabalus	3
Severus Alexander	6

## Appendix 4. Figures



Stiftung  
Preußischer Kulturbesitz

Grab- oder Weihrelief für einen heroisierten Arzt, Ident. Nr.: SK 804  
© Foto: Antikensammlung, Staatliche Museen zu Berlin  
Fotograf/in: Ingrid Geske



**Figure 4.1.** Marble stele of heroized physician receiving supplicants, late first century BCE – early first century CE. Staatliche Museen zu Berlin.



**Figure 4.2.** Grave stele of a physician, mid-second — early third century CE, Anthropological-Folklore Museum of Ptolemaida, inv. no. 79.





**Figure 4.5.** *As* showing Caracalla on horseback saluting city goddess holding statue of Asclepius. BMC Mysia (Pergamum) 320, SNG von Aulock 1414 (Image: ANS 1944.100.43361).



**Figure 4.6.** *As* showing Asclepius and Caracalla stg. face to face. BMC Mysia (Pergamum) 322 = SNG France 2239 (Image: ANS 1944.100.43371).