Roads to Health:

Infrastructure and Urban Wellbeing in Later Medieval Italy

(Preprint Version, May 2018)

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To

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*Altissima quaeque flumina minimo sono labi*
Table of Contents (3-5)

Abbreviations (6-7)
List of Figures (8)
A Note on Dates, Currencies, Wages and Prices (9-10)

Rome, 1306: A Prologue (11-15)

Introduction (16-27)
  Governmentality and Biopower (27-34)
  Healthscaping and Harm Reduction (34-41)
  Urban Places, Spaces and Actants (42-49)
  False Watersheds? Black Death and Health Boards (49-54)
  Structure of the Book (54-58)

1. Roads to Health
  Introduction (59-68)
  Private and Public Spheres (68-77)
  Health Discourses and Agents (77-83)
  Viarrii and camparii (83-104)
  Conclusion (104-7)

2. Lucca's Viarrii
  Introduction (108-10)
  Lucca's Officiale viarum: Norms (110-19)
The Roads Masters at Work (120-30)
Conclusion (130-31)

3. Bologna’s Fango Officials

Introduction (132-35)
The Fango Officials: Origins and Normative Scope (135-42)
From Policy to Practice (142-47)
Health Discourses and Preventative Programs (148-54)
Healthscaping and the Gaze of a State (154-68)
Conclusion (168-70)

4. Piedmont’s Camparii

Introduction: A Northern Tradition (171-75)
Pinerolo: From Rural Stronghold to Urban Center (175-80)
Communal Health and the Monitoring of Infrastructures (180-90)
Beyond Pinerolo (190-94)
Conclusion (194-95)

5. Healthscaping in Medieval Europe and the Premodern World (196-98)
The Italian Vista Revisited (198-215)
Beyond Italy: Western Europe, North and South (215-24)
Neighbors in Health I: East Rome (224-32)
Neighbors in Health II: The Islamicate World (232-38)
A Glance Farther Afield (238-45)
Conclusion (246)
General Conclusion (247-56)

Appendixes

Appendix 1: Fines to be Imposed by Lucca’s Roads Masters (257-59)

Appendix 2: Text and Translation of Vernacular Promulgations by Lucca’s Roads Masters (260-66)

Bibliography (267-355)

Index (356-72)

Acknowledgements (373-76)

Notes (377-450)
Abbreviations

ASBo Archivio di Stato di Bologna
   Fango Curia del podestà, Fango
   Giudici Capitano del popolo, Giudici
   Statuti Governo, Statuti

ASLu Archivio di Stato di Lucca
   AG Atti giudiziarii
   CG, Rif. Consiglio generale, Riformazioni pubbliche
   CVP Curia delle vie e de’ pubblici

ASPi Archivio Storico della Città di Pinerolo
   AC Atti del consiglio
   AG Atti giudiziarii

CSC Corpus Statutorum Canavisii. Edited by Giuseppe Frola. Biblioteca della
Società Storica Subalpina 92. Revised and translated by Francisco Razza. 3
vols. in 4. Aosta: Le Château, 2006-. (Cited by modern volume and page
numbers)

SBo35 Lo Statuto del Comune di Bologna dell’anno 1335. Edited by Anna Laura
Trombetti Budriesi. 2 vols. [successively numbered]. Rome: Instituto
Storico Italiano per il Medio Evo, 2008


List of Figures

1.1 Communes and roads masters in central and northern Italy, 1200-1500 (63)
1.2 A medieval pig (75)
1.3 L’Aquila’s Fontana della Rivera (82)
1.4 Spoleto’s aqueduct (101)
2.1 Lucca: The Roman amphitheater and its environs (111)
2.2 A Curia viarum register (122)
3.1 The Reno canal (139)
3.2 Bologna's fango official en route (146)
3.3 Monthly charges brought before the fango notary (156)
3.4 Distribution of charges brought before the fango notary (157)
3.5 Distribution of charges brought before the fango notary by register (160)
3.6 Location of charges brought before the fango notary (165)
3.7 Location and distribution of charges brought before the fango notary (167)
4.1 Pinerolo (178)
4.2 Entries in a camparius register (186)
4.3 Camparii in Piedmont (193)
5.1 A Cistercian monastery (211)
5.2 A muhtasib (234)
A Note on Dates, Currencies, Wages and Prices

To promote their autonomy numerous towns and cities of medieval Italy developed administrative practices whose diversity continues to resonate from local archives today. The calendar year commonly began in the peninsula on 25 March, but it could commence on different dates in different cities, including this book’s principal case studies of Lucca (1 January), Bologna (25 December) and Pinerolo (25 December). Streamlining these differences in usage, dates have been silently adjusted to the Gregorian calendar. Thus, for instance, the date 28 December 1312 in a Bolognese or Pinerolesse document will appear in the text and notes as 28 December 1311.

The region’s principal moneys of account were the lira (Latin: *libra*; pound), soldo (*solidus*; shilling) and denaro (*denarius*; penny), whose ratios were fixed as follows: 1 lira = 20 soldi = 240 denari. Despite this uniformity, however, local purchasing power could differ significantly; and, throughout the study’s chronological span, currencies’ comparative values were constantly in flux, as also expressed by their value relative to the major regional coins of trade such as the Florentine florin, the Venetian ducat and the Bolognese bolognino grosso. The present study does not engage in any rigorous analysis of what cities spent on (or saved through) their preventative health programs, but finances do matter in roads masters’ salaries and procurement expenses on the one hand and fines meted out to the offenders they prosecuted on the other.

While each city and its financial trajectory is unique, it may be useful to offer two sets of broad regional coordinates, based on the well-documented case of Florence (Goldthwaite, *The Building of Renaissance Florence*). Here, the
The average daily wage of an unskilled laborer climbed from around 3 soldi in the early fourteenth century to around 4 soldi before the onset of the second pandemic in 1347. In the plague's immediate aftermath, salaries more than doubled to reach around 10 soldi in the 1350s and 1360s, and then continued to fluctuate between 8-10 soldi until 1400. For most of the fifteenth century, daily salaries hovered just above 10 soldi (occasionally reaching 12 or 13 soldi), before declining in the 1490s to a lower range, somewhere between 8-9 soldi, which lasted into the early sixteenth century. The purchasing power of these salaries likewise changed over time and space, fetching anywhere between a third of a staio of wheat (around 8 dry liters) during famine or inflation and a whole staio when labor was scarce or produce plenty.
Rome, 1306: A Prologue

The eternal city had very mortal denizens.¹ Even as the flood of pilgrims around the Jubilee year of 1300 began to subside, easing crowdedness and pressure on scarce resources, Romans continued to face health risks on a routine basis. Across the hospital of Santo Spirito, for instance, on the main road leading to Saint Peter’s Basilica, certain grounds belonging to the hospital had become an unruly wasteland, raising fears about local conditions. Deviant activities and filth strewn among the ruins—many complained—were polluting the air; the sights and odors were gravely damaging:

Near a public road that Roman citizens, both male and female, and numerous others use when approaching the boundaries of the basilica of the Prince of the Apotles...in empty lots, yards and ruins, a large amount of squalor and fetid matter arrives daily due to inconsiderate littering, as well as hay and dung and other waste and filth. And ribalds thoughtlessly do fetid and repulsive things in that place, on account of which those passing along that road cannot travel without protection. Indeed, they see those men doing such foul things and through the damage and harm thereby incurred and the injury caused to people throughout the neighborhood, as well as to the confraternity members and the household of the said hospital, the air becomes corrupted and is corrupted and infections arise, from which grave illnesses can ensue.²
To investigate the claims, the magistrates summoned what by then had become a staple organ of urban policing: the public works and roads masters (*magistri hedificiorum Urbis et viarum*). The outfit had a fixed-term, rotating leadership, as was common in cities across Italy. That year the office was headed by Giovanni de Cancellario, Lorenzo Giovanni Statio and Matteo Cinthi de Rustici, and served by a dedicated judge, Gregorio de Fuscis de Berta. Like their predecessors since at least 1227, these men were tasked with protecting Rome’s infrastructure, both in and beyond the city’s walls. In principle and in practice, their remit included dealing with threats to public health stemming from the misuse of communal spaces or, as in this case, issuing from a private site. For, while there was no dispute that the field in question was owned by an independent religious entity and as such fell outside the *magistri*’s jurisdiction, its neglect presented the officials with an opportunity to redefine a traditional boundary between private and public spaces. To justify such an incursion, the *magistri* could have resorted to bringing criminal charges or else appeal to a possible economic setback. Instead, they chose to underscore the government’s prerogative as the main entity responsible for the city’s health.

Promoting hygiene at the population level by maintaining shared spaces and infrastructures is a staple of modern healthscaping, the process of creating places where health can bloom. As a material aspect of communal prophylactics, however, healthscaping’s roots run far deeper than medical historians and public health professionals tend to think. For, even in its fourteenth-century modality, healthscaping dovetailed with a long-standing tradition of pious works such as digging wells and building bridges, activities that for centuries beforehand were recognized as moral-prophylactic measures in their own right. These and other
preventative interventions also constituted what some critical theorists have
dubbed a biopolitical act. For, the appropriation of a health discourse to frame
their stance helped different stakeholders push against a spatial correlation
between private property and the private, domestic and corporate sphere from a
new direction, enabling for instance public disciplinary power to expand into
homes, production sites and—as in the present case—religious compounds. It
was no accident that the notary framing the Roman officials’ arrival at the scene
invoked two key vectors for disease transmission that had great purchase in
medieval (and ancient) medical theory, namely ocular intromission and
miasmatic odors.6 Indeed, it would have been difficult for officials to designate
trash itself as what Mary Douglas famously termed “matter out of place” in a
privately-owned plot.6 Yet the visibility of foul matter and polluting actions from
the main road, along with the stench these collectively generated and threatened
to broadcast into the air, were sufficient grounds for entering the field
legitimately and ordering its clean-up. The actions would be undertaken in the
name of preserving public health, morality and safety.

Seizing their chance, then, the works officials responded swiftly. They
gathered their underlings—Jacopo Petri Piperi, a notary; Giovanni Leonardi and
Leonardo Petri Angeli, masons; and Lorenzo Romani Muti, a lower-ranking
official—and sent them to conduct a preliminary investigation, which included
the inspection of the site and collecting eyewitness testimony. Once their
subordinates were done, the magistri made their way to the plot in person and
verified the basic facts of the case. Despite abundant proof of the hospital’s
responsibility and the field’s ongoing neglect, the officials’ conclusions and
instructions were constructive and harm-reductive rather than overtly punitive.
Perhaps they believed in taking a mild approach, or else feared overplaying their hand when it came to policing a private site, indeed one belonging to a prominent charitable foundation. Either way, instead of identifying individual culprits or fining the hospital for its complicity in polluting the area, they simply asked the institution’s governors to scour and enclose the vacant plot, “so that ribalds and anyone else could not enter it and place any unsightly or fetid or filthy matter there, or allow any putridity to issue forth from the said ruins and into a public way.” Reducing the health risks of miasma and intromission thus seems to have been the *magistri*’s most urgent business, although even their modest demands simultaneously sought to reinforce behavioral norms regarding urban hygiene and the government’s prerogative in enforcing them.

The intervention’s legitimacy, in other words, greatly relied on an ability to convince residents that it benefited the city’s health and the public good. Setting aside the biological consequences of the *magistri*’s actions, the very notion that rulers of a medieval city cared about population health, much less formed organs to promote it and tie their political fate with its perceived success, is rather striking. For it contrasts sharply with a prevailing modern view of premodern governments and urban residents as both medically ignorant and apathetic to communal health hazards. The social, cultural and political roots of this view today can be traced to Euro-American imperial, colonial and nationalist agendas, which publicized public health as a key accouterment of civilized, Western modernity. Yet, as this book will argue, such roots rarely reach much deeper. That is to say, they are hard to ground in medieval European or—more broadly—premodern sources.
In this sense, 1306 Rome was typical. Numerous normative sources and documents of practice from that period, such as those produced by public works officials across the peninsula, contradict a widely held view on the historical development of public health. The present book accordingly reconstructs one chapter in the history of these seemingly pedestrian interventions, situates them in their political, material, administrative and medical-theoretical contexts, and traces how urban residents embraced and resisted them in several Italian cities. Beyond filling a particular lacuna, moreover, illuminating premodern preventative theories, policies and practices is also an invitation to interrogate the hegemony of the modern. For it spotlights how earlier societies engaged in healthscaping as a biopolitical and disciplinary project, and it demonstrates how its negotiation unfolded on and through an assemblage of physical infrastructures and their administration. Recognizing the presence of these dynamics, and their ubiquity, underscores the extent to which a prevailing construction of medieval (and more broadly, premodern) civilizations reflects mostly what ideologues of Euro-American modernity imagined they were rejecting: an unsophisticated but ultimately seductive form of othering. As such, it is worth exposing in full.10
Introduction

Health was a governing discourse for the well-run medieval city. In his guide to the aspiring podestà, the *Liber de regimine civitatum* (*On the Governance of Cities*), Giovanni da Viterbo asserted in the mid-thirteenth century that:

The city falls ill on account of bad rulers, just like men do. For the earth falls ill and is ill when it fails to bear the accustomed and regular fruits in the accustomed way; and ill is the water that fails to produce fishes in the accustomed way. It is thus truly a matter of concern for both citizens and cities to appoint a good head, to ensure that they live safely, at peace and in calm, for an entire year [=a podestà’s regular term], and that all are of one mind.¹

Da Viterbo’s organistic metaphor mainly alludes to disease and corruption, not health and regeneration. Yet the text also nods at three major approaches to health, namely as a (bio)medical, holistic and wellness-related condition.² For, while implying the mechanical definition of communal health as the absence of disease in the city, the author also underscores socioeconomic and political aspects (safety, peace, unity) and invokes a moral dimension attendant upon helping urban communities to thrive. It may surprise some present-day readers that these diverse approaches to health already informed medieval medical theory, policy and practice, upon which Da Viterbo certainly drew.³ But what may be even more striking is the very existence of a concept of *communal* health, indeed one that formed a key plank in urban governments’ mandate.
For the link Da Viterbo drew in this acclaimed text between the healthy human body, the fertile land and the well-ordered city would have resonated far and wide in later medieval Italy. Here, especially in the numerous towns that began to rejuvenate and dot the landscape since the twelfth century, the intertwined ideals of piety, order, beauty and health served as central motifs in urban panegyrics, from Bonvesin de la Riva’s *De magnalibus urbis Mediolani* (1288) to Leonardo Bruni’s *Laudatio Florentiae urbis* (1403-4?). Yet urban rulers and residents went beyond sponsoring self-serving poetry and prose. Given cities’ precarious demographics since the late thirteenth century and their constant reliance on rural migration, inhabitants took note of the unique risks they had to manage, including crowdedness, violence, food and water shortages, floods (also of their expanding hinterlands), air pollution, disease and a limited sense of social cohesion, to name a salient few. People’s goal, moreover, was not merely to inventory grievances; like other medieval and premodern societies, Italian urbanites developed resources they believed would reduce the dangers they faced, as numerous scholars have documented and analyzed over the past century. Collectively their efforts challenge the era’s modern reputation for apathy, ignorance and neglect.

The observation holds well beyond the Italian city-states, even as peninsular evidence tends to be thicker on the ground. In the scholarly literature it is the British Isles, in fact, that occupy a particularly prominent place, beginning with Ernst Sabine’s seminal articles on medieval London and culminating, most recently, in Carole Rawcliffe’s long-awaited monograph, *Urban Bodies: Communal Health in Late Medieval English Towns and Cities*. Beyond the nuanced view Rawcliffe provides, the sheer weight of the written and material
evidence she marshals regarding population-level interventions amounts to a veritable milestone; all the more so since it concerns a region so closely associated with the birth of the public health movement in the later eighteenth century. Sabine, Rawcliffe and others have shown that there is nothing anachronistic or philologically dubious about describing diverse legislative, administrative and enforcement initiatives between the thirteenth and the sixteenth century as actions designed pro maiori sanitate hominum, for people's greater health.

Certainly, the Latin sanitas, salubritas and especially salus could mean in ancient and medieval contexts far more than an excellent organic or biological condition. As Da Viterbo's allusions to illness and disease imply, health could also have a moral and spiritual aspect (salvation), a holistic quality balancing diverse dimensions of one's body or a social or even environmental quality approximating the modern terms “wellbeing” and “wellness.” Even more importantly, in conjunction with the substantive publicum, which by the later Middle Ages had assumed many of the spatial, social and political connotations of the later English term “public,” the semantic overlap with communal health is substantial, if by no means full. As we shall see, a plethora of scientific, literary and administrative sources consistently denounce certain physical matters, urban conditions and human and animal behaviors as threatening populations’ health and safety. These, alongside rich archaeological remains (which this book, however, only summarily treats), attest the routine introduction of measures designed to fight disease, improve safety and reduce air and water pollution explicitly for the benefit of identifiable social groups as such: royal subjects, urban residents, military combatants, cloistered monks and nuns and so forth.
Scholars working on other regions have presented analogous evidence to Rawcliffe’s, often more modest in scale, in books and articles dealing with urban populations in Iberia, the Balkans, Russia, Scandinavia, the Low Countries (present-day Belgium and The Netherlands), France, Italy and Germany: a sustained effort that has collectively turned medieval and early modern public health history into a vibrant field.10 The latter has been further enriched by studies on parallel practices and norms in the southern Mediterranean basin, Asia, Africa and the Americas (see chapter five), and it benefits regularly from the integration of new methodologies and approaches championed by paleopathologists and zoo-, civic- and bio-archaeologists.11 This welcome proliferation has however yet to alter a prevailing ameliorist narrative outside (and at times even within) specialist circles in charting the transition into modernity. The rise of the public health movement continues to be seen as a response to or indeed a byproduct of industrialization, nation-state building, democratization, the expansion of formal education and the advance of science and technology, processes commonly linked with Euro-American modernization. Scholars working from within a modernist paradigm thus largely ignore the evidence amassed by those working on earlier periods, wedded as they often remain to public health’s unique transition into—or indeed birth in—the modern era.

A recent example of such tendencies was penned by Roy Shepard, a physiologist and author, among numerous other works, of An Illustrated History of Health and Fitness, from Pre-History to our Post-Modern World. Here, a long section dealing with the Middle Ages begins with a standard condemnation of the Catholic Church for its complicity in that era’s reduced health outcomes.
According to Shepard, collusion between political and religious elites undermined people’s personal fitness by requiring their frequent presence in church or else on the military training- or battleground. It hardly helped, of course, that “at least half of educated physicians were still members of the Clergy,”12 the assumption being that clerics’ commitment to communal health would have been severely compromised by their faith. The author by no means essentializes medieval culture in its entirety; it is western Europe specifically where standards of civilization had declined:

In stark contrast with the Islamic world, the Christian population [of medieval Europe] seemed to have little concept of either Public Health or Preventative Medicine, and the sanitary conditions in most of the growing cities were appalling.... Western Medieval Cities paid little attention to Hygiene. Untreated waste was thrown directly into the rivers of London and Paris.... Uncontaminated water was a rarity, and a lack of systematic refuse disposal encouraged rat infestations. Infrequent bathing and unwashed woolen clothing led to a proliferation of fleas and other insect vectors, and this favoured the spread of epidemics among urban populations.13

Specialists may easily dismiss such pronouncements as the dated exaggerations of an armchair historian, whose familiarity with medieval European prophylactic theory, policy and practice may be based on older research. However, not a few professional historians and on occasion even European medievalists toe a similar line, thereby advancing repeatedly
disproven (or at least routinely contested) assumptions to the ostensible cutting edge of scholarship. The influential urban historian Jean-Pierre Leguay, for instance, claims that medieval French society “did not know how to preempt” environmental threats and that interventions were by and large top-down reactions to materialized threats rather than potential dangers. Medical historian Irma Naso, in her seminal study of health professionals in late medieval Piedmont, argues that the region’s cities were “entirely bereft of the most basic norms of hygiene,” based on criteria that, like Leguay’s and Shepard’s, are quite modern. And even an otherwise well-informed economic historian, who certainly recognizes “a turn regarding the awareness of communal risk” in late medieval cities, simply assumes that urban centers were perennially filthy and dangerous. He explains this phenomenon by the pseudo-disarming observation that “the majority of inhabitants simply was too poor to be aware of the hygienic hazard they caused with their behavior and to reduce or avoid this risk.”

The condescending association of religiosity or poverty with hygienic ignorance or incapacity is hardly unique to the modern Euro-American imagination of medieval alterity, although it by all means remains a central plank in it. As we will shall see, Christian doctrine as well as religious institutions helped define health and could be instrumental in promoting community prophylactics, even if in ways that modern science defines as ineffective. But a certain degree of stereotyping is to be expected. After all, premodern public health, while certainly an emerging field, remains relatively small, and since most surveys are composed by historians of modern public health, often with some biomedical training, working within medical schools and writing for clinically informed audiences, their accounts tend to be teleological, rarely
venture beyond the accepted boundaries of modernity, and emphasize achievements in applied epidemiology. In other words, the most prevalent conception of public health today is as a major and often exclusive product of modernity. As the authors of another recent textbook claim, again more by way of assumption than conclusion, “modern public health began [in the late eighteenth century] with efforts by city governments to deal with environmental problems, such as ensuring fresh water supplies, air quality, the removal of waste, and even the location of burial grounds.”

Here, as in much of the scholarship published over the last two decades or so on the history of public hygiene and safety, the circular argument prevails that urbanization, spurred by the Industrial Revolution, greatly reduced the quality of life and work conditions across Europe. This radically new situation rendered population-level interventions more urgent than ever before, yet certain conditions had to be met before such plans could become effective and gain real traction, or indeed even cogitated. State apparatuses had to be robust enough and governments’ attention for the urban laboring classes sufficiently justifiable to oust traditional stakeholders such as the church and craft guilds, entities that are often depicted as holding back progress. Thus, according to a prominent historian of modern medicine, “it is not until the secularization of charity as a new kind of social welfare that we see the beginning of a genuine public hygiene.”

Echoing a similar periodization, a major early modern historian of science likewise asserts that, “not only does the eighteenth century see the first efforts at a continuing alliance between state officials and medical personnel to effect measures of public health, it also sees the first coherent articulation of hygienic policy for populations at large.” Such statements are based either on
unfamiliarity with premodern realities and a century of scholarship about it, or a
highly tendentious reading of the available evidence and literature. Either way,
they are no longer tenable, even as broad generalizations. It may therefore be in
scholars’ better interest to heed Rawcliffe’s call for “less mud slinging and more
facts.”  

The irony of modern medical historians holding back medieval public
health history applies to a fairly recent trend; it is not perennially true. Most
modernists (and, to repeat, not a few medievalists) approach public health in
previous eras without the insights of specialists’ conclusions as well as some
earlier observations by fellow modernists. Indeed, perhaps even more surprising
than their implicit rejection of studies on premodern public health is recent
authors’ inexplicable abandonment of foundational works, likewise often written
by scholars trained both as physicians and medical historians, who espoused a
rather more ecumenical approach. Notwithstanding their view of public health
as fundamentally a form of applied epidemiology, scholars such as Alfons Fischer
(1873-1936) in Germany, René Sand (1877-1953) in Belgium, Colin Fraser
Brockington (1903-2004) in Britain and George Rosen (1910-1977) in the
United States certainly recognized a shared impetus behind recent and much
earlier societies’ preventative interventions. And although they tended to
characterize the introduction of quarantine and cordons sanitaires, the move to
extramural burials and the hiring of public physicians as belated and mostly
unsuccessful reactions (above all to plague), they nonetheless incorporated them
into their accounts sympathetically, if at times condescendingly. As Sand put it in
Vers la médecine sociale (1948), “[p]ublic health is scarcely of later origin than
personal hygiene. State rulers accepted it as their province, and it was given a
positive character and practical expression even before the art of medicine.”

Across the Atlantic, the German-trained Rosen defended a similar view by arguing that:

Throughout human history, the major problems of health that men have faced have been concerned with community life, for instance, the control of transmittable 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. The relative emphasis placed on each of these problems has varied from time to time, but they are all closely related, and from them has come public health as we know it today.

Such inclusiveness is perhaps all the more remarkable since Sand’s and Rosen’s surveys were written in the late 1940s and early 1950s, when optimism about modern medicine’s capacity to beat disease was especially contagious. In other words, they could have been more easily forgiven for sidelining developments in earlier or other cultures. On the other hand, the enthusiasm permeating the felt progress of modern social medicine may have been more amenable to a larger backdrop against which it could celebrate its triumph.

Be it through the generosity of would-be winners or thanks to an unbridled curiosity, openness continued to inform the works of subsequent scholars, who were becoming increasingly critical of earlier ameliorist narratives. Dorothy Porter, for instance, composed compelling chapters on ancient and medieval public health as part of an explicit attempt to revise
“accounts of the triumphant emancipation of modern society from the primitive bondage of ignorance.” Her fine and otherwise influential 1999 survey accordingly stressed the concerted promotion of health in ancient Greece and Rome (above all for and by urban elites) and the positive role played by the church and municipal governments (especially in later medieval Europe) to fight the spread of diseases such as leprosy (which Porter thought was then deemed contagious and morally compromising), provide clean water, control the quality of food and build public baths for the general population.

Porter’s work defines a high watermark of interest in earlier eras among modernists. Most monographic studies to follow, not to mention later historical surveys of public health, seem to have abandoned her openness, as exemplified above. In the remainder of this introduction, I propose several explanations for the current state of affairs, in which a particular kind of modernist bias seems to be shaping more recent studies, including some authored by historians of medieval Europe. Beyond offering what may be a broader historiographical and theoretical analysis than is the wont of works on premodern public health, however, the present book as joins other scholars within medieval studies in presenting further evidence for the routine development and implementation of preventative healthcare measures, focusing on Italian cities between the early thirteenth and the late fifteenth centuries. In doing so, it emphatically does not seek to deny the intellectual, political, economic, cultural, technological and administrative changes that took place in western Europe towards the end of the eighteenth century and likely in response to the continent’s mass industrialization and urbanization. Yet it does wish to resituate those developments on a longer trajectory of earlier municipalities’ and governments’
public-health related initiatives, and shine a light on communities’ attempts to promote health and fight disease in ways that were meaningful to them and utilizing the resources at their disposal.

The present book accordingly proposes to examine public health from an emic (“insider”) perspective as a dynamic and historically contingent set of legal prohibitions, disciplining practices and subtle insinuations designed to improve health outcomes at the population level. It is decidedly not meant to set up later medieval cities as the antechamber of modernity, although resisting the teleology does not amount to suggesting that the period under consideration and eighteenth-century developments share no common ground whatsoever. For, if cities threatened to turn into Europe’s demographic black holes in the aftermath of industrialization, why not examine how governments and residents dealt with comparable pressures during western Europe’s first—medieval—widespread proliferation of cities and in one of its most urbanized regions, namely central-northern Italy? At this, by now well-documented level, my goal is to stimulate a different kind of conversation among health and medical historians and enable them, if not to reject, then at least to tread a little more carefully (and certainly less giddily) across an assumed pre/modern divide. Without dismissing the distinction’s analytical value tout court, it is important to ask more precisely what happened and more deliberately where lies the qualitative gap between two postulated (and all too often essentialized) eras, rather than assume and thereby perpetuate the notion of a pervasive hygienic ignorance among premodern urban residents.

Beyond curiosity, what prompted the present attempt to interrogate the accepted wisdom about the pre/modern divide when it comes to public health,
was a genuine discomfort with its premise: since health is nearly synonymous with the concept of good, to argue that, prior to the late eighteenth century, European societies had little or no concept of public health, let alone sought to apply it to their living environments, comes remarkably close to saying that they had no desire to pursue the public good. This rather extreme form of othering would sound almost comic were it not echoing a broader truth about narratives of Euro-American progress; and in this sense, medieval Europe is to the Western past what the Islamicate world is to the Western present in the early twenty-first century: a foil for the achievements of modernity. 31

Interrogating an essentialized view of medieval civilizations’ health norms does not amount to rejecting its history, which receives ideological or at least unwitting validation from various corners. The sections that follow begin by illuminating key intellectual, and to an extent ideological, frameworks undergirding a nearly ubiquitous attitude. They demonstrate that recent (medical and other) historians’ bias is not singularly responsible for marginalizing the field of premodern public health. In certain ways historians of premodern health have themselves contributed to the current state of affairs. The remainder of the introduction accordingly explores some of the historiographies and critical insights that public health historians, and especially those studying medieval Europe or the premodern era more broadly, can benefit from critically engaging with. These in turn inform the subsequent chapters of this book, whose structure is briefly laid out towards the introduction’s end.

Governmentality and Biopower
In the early twenty-first century, to interrogate the pre/modern divide from a public health perspective is to enter a debate on the interrelated terms of governmentality and biopolitics. Since the late 1970s an analytical strand associated with Michel Foucault and colleagues at the Collège de France has buttressed a perception of public health as a byproduct of modernity from a new direction. Broadly speaking, the school’s interpretative framework revisited numerous practices currently associated with capitalist modernity and (re)cast the later eighteenth century as a moment in which political reality began to splinter into numerous power/knowledge domains, each with its own disciplining “gaze” and other techniques of governance: a complex phenomenon known as governmentality (*gouvernementalité*).

Resisting a linear view of nation-state building and political centralization, Foucault and others trace the emergence of a matrix-like power structure of micro-specializations and fields. This proliferation in its turn forced a much more limited State, bereft of hegemonic power, to foster its own intrusive and self-preserving forms of governance, or as it was known since the seventeenth century, a “reason of State” (*raison d’État*). Seen in this light, modern polities were not singularly bent, in the first instance, on defending citizens’ rights or even securing proto-national economic interests. Rather, theirs was a quest to perfect “an art of governing that assigned priority to all that could strengthen that state and its power and that sought to intervene into and manage the habits and activities of subjects to achieve that end.”

Pursuing the reason of state, then, like promoting any and all forms of governmentality, involved a great deal of disciplining. In striving to condition people’s behavior (also known as the “conduct of conduct”), governments too
defined population-level problems anew and devised solutions for them, enabled by and shaping new technologies of power: from gathering and displaying statistical data, to developing national medical, educational and penal systems, to determining desirable birth rates, sexual mores and health regimens. These were sometimes couched in terms such as the economic and biological health of nations, but—from a Foucauldian optic—they were more often than not subordinated to a recalibrated reason of state.

It was in this context too that Foucault coined the term biopolitics, defining it as:

[T]he endeavor, begun in the eighteenth century, to rationalize problems presented to governmental practice by the phenomena characteristic of a group of living human beings constituted as a population: health, sanitation, birth rate, longevity, race.\(^{34}\)

In other words, key concerns of what societies purportedly discovered in this period as matters of public health were actually governmental techniques designed to secure a place for the beleaguered state, the medical profession, journalists, architects, farmers, scholars, the army, midwives, sanitation workers and so forth. The life of a population hence became a key structuring concern of micro-politics, which could certainly, if not primarily, benefit nations, races and populations. In this sense, the panoptic prison, the hospital, the mental asylum and the military barracks were but simplified and blown-up versions of life at large, since it was individual life, residing in human bodies wherever they may be, that was the real battleground of power.
To be sure, important technological and intellectual developments in eighteenth-century Europe enabled governments and numerous other stakeholders to reach deeper and farther than before into people’s routines and psyches and insinuate themselves into physical behaviors and life choices. And it may well be the case that a general awareness of greater investment in the “conduct of conduct” grew significantly in this period and even galvanized liberalism into a viable, indeed urgent, political project. But to surmise from a certain consolidation of practices and their vocal critique that earlier governments and other agents refrained from, let alone lacked the insight or desire to manipulate multiple walks of human life, is to make a circular argument at best. At worst, it is to make an argument based on silenced sources.

If the later eighteenth century saw a major increase in the visibility, sophistication and corresponding documentation of discipline, that process neither refutes the coexistence of traditional power (sovereignty) and biopower, nor proves that a single vector determined premodern biopower, that is the negotiation of power at the level of life. Indeed, these modalities’ simultaneity and interaction far predates the eighteenth century. As Giorgio Agamben put it, “[i]n placing biological life at the center of its calculations, the modern State merely brings to light the secret bond that unites power and bare life [nuda vita], thereby retying the most immemorial of arcana imperii.”35 Agamben may have oversimplified Foucault’s concept of biopower by reducing it to a legal right reserved to a sovereign or state. Yet he nonetheless raised an important challenge, namely the possibility of biological life serving as a political object or of population-level health structuring political discourses well before the modern era. For matters of life and death were never limited to rulers’ judicial
power, but instead were inherent to their executive practices, as well as to those of other actors in the domestic and corporate spheres.

Detecting the presence of biopower brokering in premodernity therefore is a matter of becoming more attentive to its diverse manifestations and vectors. Such awareness relies in no small part on an ability to understand how people in different periods defined health at the individual as well as the group level. One roadmap for gaining the necessary insight has been provided by two prominent Foucauldians, Paul Rabinow and Nikolas Rose, an anthropologist and a sociologist, respectively. In a widely-cited paper published in 2003 and entitled “Thoughts on the Concept of Biopower Today,” they described biopower as consisting in diverse:

[M]odes of subjectification, in which individuals can be brought to work on themselves, under certain forms of authority, in relation to truth discourses, by means of practices of the self, in the name of individual or collective life or health.\(^{36}\)

Needless to say, the authors assume that these modes originate in or are at least typical of modern societies, although they are willing to admit that the moral economy underlying regular (“non-paroxysmal”) forms of biopolitics have far deeper historical roots. Indeed, both the conditions enabling such practices and the practices themselves can sometimes be documented centuries earlier. For instance, the “archaic” preventative modes of intervention used in 2002 to combat SARS “were basically those of quarantine first applied to epidemic outbreaks such as plague at least since medieval times.”\(^{37}\) We will later return to
the role (often disruptive, in my view) that epidemic disease plays in the historiography of premodern public health, but suffice it to say at present that numerous interventions, in and outside the context of a looming crisis, and which have already been documented for premodern societies, nicely fit Rabinow and Rose's bill.38

The near-invisibility of such earlier cases in governmentality studies is by no means due exclusively to modernists' myopic gaze. Medieval health historians' apparent disinterest in historicizing biopower has played a leading role as well. Few of us to date (myself included) have grappled with this particular aspect of the pre/modern divide, in sharp contrast to our modernist colleagues, for whom governmentality and biopower have by now become a common interpretative framework or at least a paradigm to reckon with.40 Take, for instance, Sara Butler's seminal work on medieval forensic medicine, mostly based on coroners' reports from England. Among modernists the nexus of criminal law and medical authority explored in Butler's study would very likely lend itself to questions about the promotion of the reason of state by giving “official” authority to certain types of medical knowledge in circumscribed arenas such as police work and jury trials. Butler certainly acknowledges that “[t]he close cooperation between the state and the medical profession in criminal investigations laid the groundwork for the growing field of Western forensic medicine.” However, the study as a whole traces power as flowing mostly in one direction:

Without the backing of the state, the medium of state legislation, and the process of state licensing, professionalization of medicine would have
floundered. Elite medical practitioners relied heavily on cooperation with the state to assert their superiority in the medical marketplace, making them the official assessors of acceptable medical practice.41

Butler certainly makes the latter case, and meticulously so, as have others who documented the rise of the medical profession elsewhere in the later Middle Ages: a remarkable feat given its apparent failure to defend or cure people from repeated bouts of plague. Yet the absence of a historiographical agenda meant explicitly to unearth a more multi-directional negotiation of power, benefiting or indeed enabling the state itself, remains typical of medieval medical and health historiography.

Rebuttals of governmentality’s inherent modernism are thus few and far between. Iona McCleery, for instance, posits “biopolitical awareness” among thirteenth- and fourteenth-century Portuguese kings, as manifested in their desire to regulate medical licensing. What we are dealing with in the Portuguese context, McCleery avers, is not merely another instance of political centralization, but biopower brokering that is invested in maintaining a healthy labor- and military force, intimately tied with royal concepts of authority.42 And Nükhet Varlik, to take an example from the eastern Mediterranean, argues that the early Ottoman state honed “new technologies of surveillance and governance of [living and dead] bodies,” whose surviving documentation strongly suggests a desire to negotiate power at the individual life level.43 Yet to the best of my knowledge, these examples—which, to be sure, remain focused on state apparatuses rather than proliferating expertise in other sectors—exhaust premodern health historians’ attempts to engage with biopolitics as an analytic
framework. This historiographical state of affairs goes some way to explain why at least the implications of much fine work continues to fall on deaf ears.

The present book aims not simply to dress earlier work in a new and perhaps more attractive garb. Rather, it seeks to stress, also by means of this extended section, that it would be useful to historicize governmentality and biopower explicitly for the benefit of health historians occupying ground on either side of a commonly accepted or inadvertently promoted pre/ modern divide. In the case of numerous Italian city-states, as this book will show, governments’ and other agents’ quest for authority and control meant aligning their prerogatives with certain forms of health promotion. The modality did not have to wait for the rise of Absolutism and neo-Stoicism, let alone nationalism, secularism, representative democracy and advanced science and technology. As such, it was a choice informed by and responding to recent intellectual, social and technological developments. Only a monolithic and reductionist view of premodernity (modernity in this case emerging in the sixteenth century and fully visible in the eighteenth) would assume that regimes throughout this long period focused entirely on territories before gradually moving to develop “a government of humans and their conduct in relation to ‘things’” as opposed to the allegedly modern phenomenon of “government through processes.” To do so would be to ignore the rise of other forms of power/knowledge, especially among new learned and economic urban elites, and how these shaped the agendas and strategies of traditional and more recent political echelons.

Healthscaping and Harm Reduction
Governmentality studies since Foucault echo and perpetuate his view that discipline’s thrust is never uniquely top-down from a socio-economic perspective.\textsuperscript{45} In a similar vein, and despite the inherent bias of most legal and administrative sources at the basis of this book, a specific effort has been made to suggest alternative gazes, normative impulses and forms of agency that participated in shaping public health interventions from the social bottom up, as well as horizontally, insofar as power can be accurately described in terms of vectors. This study accordingly postulates a variety of stakeholders rather than commits to a static hierarchy among them, works under the assumption that health literacy and authority remained in constant flux, and accepts that medical hybridity or pluralism, as distinct from the medical marketplace, was for many people an experienced reality, not a lofty ideology.\textsuperscript{46} It was this general indeterminacy of power that underlies my choice and appropriation of “healthscaping” as an umbrella term covering a plethora of processes and tasks and the affordances they created. Yet the term is worth clarifying since it is being employed here at some distance from its original drift.

Healthscaping was coined and to some extent popularized in 2005 by public health professionals Tom Farley and Deborah Cohen in their provocative \textit{Prescription for a Healthy Nation}.\textsuperscript{47} Farley, a pediatrician and then-chair of the Department of Community Health Sciences at Tulane University,\textsuperscript{48} and Cohen, an epidemiologist working at the RAND Corporation, designed an alternative blueprint for improving US health. With rampant cancer, cardiovascular disease and obesity, as well as rising gun- and car-related deaths ravaging their nation, the authors proposed to stop spending money on developing expensive cures for people who can rarely afford them, and begin to invest seriously in
healthscaping, that is, in designing environments where health could bloom. By calling for an intense focus on changing people’s risky behaviors, the authors were not merely challenging the value and role of curative medicine generally, but also took public health professionals to task for engaging in what they described as “applied bacteriology.” Vaccinations are important, the authors claimed, but they are useless when it comes to changing habits that are detrimental to health: smoking, alcohol and drug abuse, (over)consumption of salty, sugary and fatty foods, driving recklessly and wielding firearms, to name only a few of America’s greatest killers. As for those stressing the importance of better health education, moreover, the authors marshal ample evidence that informing people about how to lead healthier lives is not only ineffective, but downright pointless where access to nutritious produce, the likelihood of balanced diets and opportunities for exercise are highly limited, especially for the inner-city and rural poor.

According to Farley and Cohen, then, improving health outcomes largely depends on governments’ and NGOs’ ability to encourage—or, to use a more recent euphemism, nudge—people into making healthier choices. They do not expect change to arrive in the first instance from improving education and allowing individuals to make better-informed decisions (let alone incorporate their input regarding what health means). Rather, they propose to make scientifically defined “healthier choices” the path of least resistance for the population as a whole. At the legislative level that could mean, for example, raising taxes on, or otherwise severely restricting access to, tobacco and alcohol; abolishing trans fats, highly sugary drinks and very salty foods from school cafeterias and vending machines, supermarkets and restaurant menus, or else
signaling them as undesirable; and revising gun laws to drastically limit the possession of firearms by the general population. Obligating people to wear seatbelts and carmakers to install airbags are further examples of simple and affordable intercessions meant to improve health outcomes as compared with building more emergency rooms, training more trauma surgeons or even subsidizing more driving safety courses. Farley himself soon began practicing what he preached as New York City’s Health Commissioner.53

Putting aside the high-modernism or even paternalism of Farley and Cohen’s healthscaping, from this study’s perspective its major appeal is as a multifaceted process that has a tangible aspect as well, inherent in seemingly minor, low-tech solutions. As they put it:

There are three general ways that physical structures can shape our behavior and our health: by making it easier or harder to do certain things, by changing how we interact with each other, and by providing cues on how we should behave.54

From this viewpoint, which also underscores the relevance of actor-network theory (ANT; to be discussed below), the world could easily become a healthier place, for instance, if supermarkets stacked fruit instead of sugary sodas in prominent places; or if one had to go far outside one’s workplace, a bar or a park to smoke; or if sidewalks and bike lanes made it possible to leave one’s car behind every now and then. If the latter in particular were true, the world would also be a safer place, since roads would be emptier (also of reckless drivers) and sidewalks more buzzing with people, whose numerous eyes—caring, curious,
careful—could render more spaces than before visible and fewer sites neglected and thus less prone to opportunistic crime and unattended accidents.\textsuperscript{55}

As students of health and medical history more broadly would rightly point out, the strategy forged by Farley and Cohen is hardly new in its broad contours. Preferring \textit{Hygeia to Panacea}, this brand of healthscaping places a higher premium on preventative healthcare than on curative medicine. In doing so it follows an ancient maxim of medical theory and by implication a dominant principle of medieval healthcare. After all, Hippocratic and Galenic writings formed the basis of medical scholarship throughout (and beyond) medieval Europe and much of it was disseminated and popularized initially through personal health guides (\textit{Regimina sanitatis}), composed in Latin and various vernaculars for the benefit of Europe's landed and merchant elites.\textsuperscript{56} Other than sharing a similar strategy, however, it may appear that modern healthscaping exceeds the possibilities open to premodern societies. Legislating about and enforcing the policies proposed above has several preconditions and assumes the existence of certain infrastructures: a widely shared medical paradigm, a relatively centralized civic bureaucracy, a stable government that is politically motivated to address the needs of non-elites, sufficient material and human resources to execute such plans and an independent legislature. In lieu of these, could we reasonably talk about medieval European or more broadly speaking premodern healthscaping? The overarching argument of this book is that, \textit{mutatis mutandis}, yes, we can.

If we define healthscaping, more broadly than modern health professionals have, as the physical, social, legal, administrative and political process of providing urban environments with the means to promote residents'
health, safety and wellbeing, it is possible, not only to demonstrate its existence as a medieval ideal (for indeed, where wasn’t community health considered a desired good?), but also show that it was a common policy which urban governments, guilds, the church and numerous individuals pursued in practice.

The argument is less surprising than it may appear at first sight. Farley and Cohen are not historians, nor were they trying to make a historical argument that transcends their immediate experiences. Yet they do exhibit a typical modernist bias, for instance, in describing the ideas of English social reformer Edwin Chadwick (1800-1890) as “truly radical,” when in fact his demand that governments take responsibility for “providing clean water, building sanitary sewers, [and] removing animal carcasses and other refuse” was, if anything, a call to reinstate those roles rather than add them to rulers’ remits. In other words, Victorian officials may have been doing a very poor job of protecting the urban environment, but it had been their job for centuries beforehand. Once again, a careful historical investigation exposes the fallacy of a linear, ameliorist narrative underlying much of modern public health historiography. Suboptimal performance in the eighteenth century neither indicates a worse situation in earlier eras nor promises steady improvement in later ones. And what holds for Britain is also true for Italy, perhaps to an even greater extent given its higher degree of urbanization during the later Middle Ages.

Healthscaping is related to another key concept in modern public health, namely harm reduction. Like healthscaping advocates such as Farley and Cohen, harm reductionists too are not necessarily medical pluralists and they expect people to engage consciously and willingly in behaviors that directly undermine their own wellbeing and potentially that of others. Indeed, that is
precisely the premise of key public health interventions at present, from increasing access to contraceptives to providing drug addicts with clean syringes in needle exchanges. Harm reductionists’ goal is therefore not to cure disease or even prevent it among certain at-risk groups, much less criminalize behaviors associated with it. Rather, they seek to curb its adverse physiological, legal and social impact more broadly. In this sense, harm reduction often responds critically to certain types of public health interventions, including some endorsed in *Prescription for a Healthy Nation*, which some critics find too restrictive, for example from a human rights’ perspective.”Thus, whereas harm reductionists strive to limit the personal and collective impact of, for instance, alcohol and drug abuse, traditional public health practitioners target the use itself, be it by limiting access to it (for example through increasing taxation or prohibiting its advertisement in certain venues) or criminalizing it through hammering out policies and allocating resources for their enforcement.

While healthscaping certainly can make room for harm-reductive tactics, the latter are often presented as adhering to a more progressive and tolerant approach to improving health outcomes. It may thus seem ironic that, as compared with staple healthscaping measures, harm reduction is actually easier to document for the Middle Ages. Perhaps its most salient example is an accommodating attitude towards certain groups defined as social undesirables, such as lepers, orphans and prostitutes, and behaviors associated with them. As with public health and wellbeing generally, here too we are not dealing with an anachronism. Leading Catholic theologians, from Augustine of Hippo in the fourth century to Thomas Aquinas in the thirteenth, developed the so-called principle of the lesser evil *(minus malum)*, which encouraged the acceptance of a
number of deviant groups and behaviors as a legitimate alternative to eradicating them, arguing that the latter would lead to worse outcomes for the community as a whole. Tolerance of prostitutes, as Brian Pullan has recently shown, was often explicitly couched in terms of this principle. Without condoning sex work, so the argument ran, denying men access to paid sex could result in the rape and abuse of members of society perceived as more legitimate and yet vulnerable, such as unmarried young women and male children. The establishment of foundling homes, to take another example, facilitates sexual relations out of wedlock and enables child abandonment, but it also provides for the wellbeing of infants who might otherwise be killed or abused, improves the fate of women whose lack of alternatives might make dangerous abortive procedures look attractive, and protects the honor of men and especially women who were regularly coerced into unwanted or unplanned pregnancies.⁶¹

Roads to Health argues that major planks in Italian cities’ social and environmental policies and practices were similarly harm-reductive, including the regulation of waste disposal, animal conduct, taverns, workshops and marketplaces. That is not to argue that such plans were devised at the expense of other healthscaping measures, such as building leprosaria, enforcing curfew, designating quarantines, sinking gutters and hiring communal physicians. Nor, as numerous sources suggest, were preventative health programs the sole prerogative of officialdom as a normative and executive agent. For, although government (and guild) initiatives were better-funded and administratively stabler than individual or small-scale private programs, they did not define, let alone exhaust urban dwellers’ quest for environments where health could bloom.
Urban Spaces, Places and Actants

It goes almost without saying that the study of urban healthscaping, in any period or region, involves the invocation of a public sphere. The observation holds whether we understand the latter term as an open, that is to say shared, accessible and visible space, or as a public/governmental domain, theoretically distinct from a domestic or corporate one. Any action designed to identify and resist behaviors thought to put a community at risk requires defining that community and the physical sites it may legitimately occupy. Beyond recognizing tensions between a city’s conceptual map and its material topography in this context, what and who delimits the public sphere largely depends on the type of normative claim being promoted, its audience and the means deployed in its service. As this book’s prologue already suggested, medieval urban residents and government officials routinely argued that certain human and animal activities occurring squarely within private grounds impact the population at large. As such they should be subject to some monitoring and regulation, including through the threat of sanctions for non-compliance. At least in this limited sense, medieval health hazards resemble their modern counterparts, even if their medical-scientific understanding operated within a different paradigm, not to mention their distinct modalities of governing and administrations’ capacity to detect and punish violators. From this study’s perspective, reconstructing healthscaping activities could be instrumental in tracing the boundaries of the public sphere falling under a regime’s or other disciplining agents’ gaze, seeking as they did to legitimate claims for shaping collective human and animal behaviors, social relations and the city’s physical fabric, as well as local
economies, labor conditions and administrative structures. In these and other respects the study of medieval healthscaping historicizes the public sphere and adds a new dimension to a burgeoning critique of Jürgen Habermas’ view of its emergence as a uniquely modern phenomenon.

As with engaging governmentality studies, here too we are dealing to some extent with an exercise in saming and othering. In what ways were medieval urbanites (Italians, in the present case) different from their coffee-sipping, newspaper-reading Viennese heirs? Who comprised their audiences and what were participants’ agendas, techniques and strategies? Answering these and related questions helps us chart the distance traveled by European urbanism and reevaluate another key aspect of a common construct of the pre/modern divide. In particular, diverse textual and material evidence illuminate the workings of medieval biopower and the health remit that various stakeholders claimed throughout the city, physically, politically and socially. As this book will demonstrate, truth claims about health risks were often explicit in people’s words and deeds, be they in the first instance physically constructive or destructive, verbal or textual, life-threatening or life-preserving. In carrying them out, people were making, performing and normalizing certain choices, often announced in terms of following or straying from health-promoting paths of least resistance paved for them, at times by municipal governments and their officials, at others by religious institutions and their members, and no less frequently by guilds, co-workers, professional medical authorities, merchants, travellers, neighbors and kin. Mundane actions, including daily chores related to waste disposal, personal hygiene, consuming, crafting, traveling, eating and playing: each participated in enforcing, disrupting, altering, creating and
complying with conventions about what constitutes healthy behavior at the individual and—more importantly from this book’s perspective—the population level.

Any attempt to provide a thick description of medieval healthscaping may thus benefit from at least three further prisms beyond that of Foucauldian governmentality. Each of these has been shaped by different theorists concerned with urban culture. First, following Henri Lefebvre, individual and group actions can be understood as not only generating meaning but also as being endowed with it through their operation in particular spatial contexts. As already alluded to in the prologue, and as chapter one elaborates, medieval medical theory and health-related policies usually refrained from considering actions as direct threats to population health if they were performed out of passersby’s line of sight or their catchment area of scent. Thus, specific matters perceived as dangerous were ideally to be disposed of downstream or downwind (as with domestic and industrial waste), or when they took place away from areas designated as sacred, outside the city walls or another declared perimeter. In other words, spatial relations (distance, proximity, directionality, etc.) between potential threats and human and animal subjects continuously defined health or confirmed its absence.

Cities featured other practices and elements, including soundscaping, which likewise helped define certain locations as un/safe or un/healthy for those approaching them, be they humans or animals. Bells and voice alarms to warn against fire, for instance, defined what healthy movement at that point in time would be from numerous individual perspectives at once. A different type of directionality defining health and safety was flow, be it of potable water into the
city and polluted water away from it, or (in a broader economic sense) the ongoing traffic of produce and people through the city's streets, canals and gates.\textsuperscript{65} Stagnation undermined the metabolism cities relied upon and hence was deeply frowned upon, even feared, especially as regards organic matter such as blood, tainted water and excrement.\textsuperscript{66} Even cesspits, it is often forgotten, must leak in order to function properly.\textsuperscript{67} None of this is to suggest that compliance was universal or that providing resources for maintaining urban flow was always and everywhere prioritized by municipalities and residents. Yet, as the following chapters show, urban fabrics, places and spaces endowed certain actions and inactions with health-related meanings, of which more people were aware than many scholars tend to suggest.

Beyond illuminating spatial relations as endowers of meaning (un/health, in this case), studying premodern healthscaping spotlights how physical conditions and material objects embodied a city's degree of danger and wellbeing. Medieval Italians, like numerous urban dwellers at the time, routinely praised their city's honor, rejoiced in its order and beauty (of which cleanliness was an integral part) and saw in the composition of its human and physical fabric a sign of piety, good government and general health.\textsuperscript{68} Their ensemble was, as Lefebvre put it, a cherished \textit{oeuvre}, a work of art urban dwellers wished constantly to adorn.\textsuperscript{69} Beyond debunking the myth of medieval people's general apathy towards their built and natural environments,\textsuperscript{70} such pride helped consolidate a link between order and health, inherent on the one hand in human and animal behaviors and on the other in the quality of the city's material conditions. Defects such as potholes, dilapidating walls, overextended balconies and clogged drains were not merely an inconvenience or even a blight, but an
outright health threat at a time when (from a modern clinical perspective) relatively small injuries and minor infections could be detrimental, even life-threatening. More importantly from the emic point of view this book seeks to hone, medical practitioners working within a Galenic paradigm widely considered viewing decomposing organic matter as a threat to health. By the process of intromission, as noted above, sights such as rotting matter and stagnant ponds could penetrate observers’ bodies through their eyes or alternatively in the form of vapors through their noses or pores.71

Human and animal interaction with objects, then, and especially the latter’s impact (real and perceived, directly and indirectly) on personal and communal health, suggest the pertinence of what Bruno Latour and others have called an actor-network theory (ANT). ANT encourages scholars to think about social processes, including the negotiation of power, in terms of a constant translation or mediation of actants joining the human and non-human, the corporeal and artificial.72 As Latour has argued, observing objects as indispensible elements in creating and subverting a desired power structure allows us to move beyond the constraints of a structure/agency binary, and see the roles played by different kinds of infrastructure in enabling or striving for social stability.73 In the present context, this perspective helps to uncover the degree to which certain non/human concatenations promoted a nearly ubiquitous discourse of health and disease in urban life, as implied by Farley and Cohen’s proposals. For, convincing to some, forced and manipulative in the eyes of others, there was a health quality to be drawn out of numerous physical objects and social actions, structures and materials, their prescribed use, experience and the behaviors associated with them. All of these figured in what
Latour called programs and anti-programs, that is continuously revised strategies devised by government officials, professional associations, private individuals and even animals.\textsuperscript{74}

Tracing anti/programs in the field of medieval public health complements another theoretical endeavor to interpret urban practices at the individual and group level. For, rather than only seeking to establish compliance with official policy, it is possible to study how behaviors and objects as ensembles participated in rejecting, appropriating, threatening or completely ignoring it. As Michel De Certeau famously put it:

\begin{quote}
Beneath the discourses that ideologize the city, the ruses and combinations of powers that have no readable identity proliferate; without points where one can take hold of them, without rational transparency, they are impossible to administer.\textsuperscript{75}
\end{quote}

Such “surreptitious creativities” can occasionally be recovered from our sources, alluded to indirectly or otherwise shoehorned into categories of deviance by legislators, upset neighbors or court notaries: washing clothes upstream or near a well, installing a latrine off the sanitary grid, letting a sow and her piglets loose outside one's courtyard, lighting a fire after dark or selling meat off-site. What did such acts mean to those who perpetrated, witnessed and described them? It is often hard to even hazard a guess, but every now and then just enough information survives to explore certain possibilities or reject others, including a perceived impact on communal health.
Both Latour and De Certeau wrote mostly within and about a modern Euro-American context in which government is invested with a high degree of legitimate control over a large and fairly well-defined public sphere. The state is thus presumed to be in a hegemonic position of power, which it promotes and extends through what Latour calls programs and De Certeau dubbed as strategies. Officialdom’s programs/strategies, in this power paradigm, are subverted and appropriated from below by local anti-programs or “tactics,” akin to what anthropologist James C. Scott dubbed “weapons of the weak.” But if Latour’s, De Certeau’s and Scott’s complementary analytical frameworks are to be usefully adapted to a medieval urban context, no strict or stable hierarchy of power should be taken for granted. That is, nothing is inherently a strategy or a tactic, reflecting an indeterminacy of power that Homi Bhabha discussed in terms of hybrid acts or voices.

Indeed, in the emerging city-states of Italy, struggles over power were ubiquitous and multidirectional, and the public/private divide was conceptually in the making, echoing what Mikhail Bakhtin described as cultural polyphony. If we wish to hold on to some of the analytic nomenclature, therefore, it is essential to recognize that tactics could at times be relevant to officialdom as well, and non-government actors such as the church, craft guilds and even neighborhoods and households could certainly develop strategies. As we shall see in later chapters, for instance, roads masters (*viarii*) could also be seen as employing tactics when walking the city as the mobile eyes, ears and noses of urban governments; to these officials, hegemony could have been the prerogative of guilds, meat vendors and others whose strategies they were trying to contest, and not necessarily from the political top down, as many
sources tend to imply. Moreover—and here is where ANT becomes arguably more relevant—, De Certeau's analytical framework tends to ignore the agency of matter, which might impoverish descriptions of unhealthy landscapes and agents across the pre/modern divide.

Certainly, none of the prisms discussed in this section, individually or collectively, have been neglected by medieval historians in general. Yet tracing the mechanisms and processes by which population health in particular was defined and pursued, spotlights a little-explored dimension of medieval cities. Beyond providing a historical anthropology of urban health, it demonstrates that health was a constituent discourse of a medieval public sphere, albeit one operating at a different scale and in somewhat different modes than in later periods. According to Dorothy Porter, modern public health can be understood as “an expression of the way different societies addressed questions of social order and nationhood.” As this book shows, such questions were no less urgent and no less relevant to societies operating outside a nation-state context.

False Watersheds? Black Death and Health Boards

Last but not least, a book challenging some of the accepted wisdom on public health history must deal with the calamitous event known in Europe as the Black Death (and the onset of the second plague pandemic more broadly construed), and specifically with its tyranny as a historiographical concept. As Ian Forrest rightly notes in the context of English burial customs, “[c]alling upon the Black Death as a ready-made and universal explanatory factor is...perhaps the most comfortable vice of the late medieval historian.” The inadequacy of attributing nearly exclusive causal force to plague was most recently and comprehensively
exposed by Bruce Campbell, who shows that the spread of disease was itself enabled by myriad factors, processes and decisions, and compounded a “series of environmental and human crises that had been looming” since the later thirteenth century.\textsuperscript{82} Both observations may benefit premodern public health historiography in particular. For, while different historians continue to debate the exact role the second pandemic played in regional and world history,\textsuperscript{83} many of those commeting on public health specifically, including not a few medievalists, seem to be unshakeable in their view of Black Death as the queen of causes. Understandably attracted to the agency of epidemic disease and engrossed in its rich and growing source base (which now benefits from aDNA analysis as well),\textsuperscript{84} specialists politely nod at earlier interventions (usually described as ad hoc) and move to buttress the reigning consensus. To wit, they argue or at least imply that the plague’s onset ushered a new era by forcing urban governments for the first time to combat population-level risks systematically, learning from physicians on how to cure and implement preventative policies, and eventually by establishing (proto-modern) municipal health boards.\textsuperscript{85}

Behind such views there often stand critical historians trying to challenge the innovative character of eighteenth-century and later developments. Ironically, their designation of Black Death as a \textit{terminus a quo} for “real” public health history serves to perpetuate a modernist paradigm rather than expose its ameliorist assumptions.\textsuperscript{86} Thus, according to Giorgio Cosmacini, in his classic survey of Italian medicine and public health, a modern system “takes its first steps in the half century that followed the Black Death.”\textsuperscript{87} To Christopher Bonfield, a medievalist writing thoughtfully on the proliferation of health
regimen literature in late medieval England, “the greatest impetus to defend the health of towns and cities, and of course their inhabitants, had occurred centuries earlier [than the Industrial Revolution], with the arrival of the Black Death in 1348.” And Martha Bayless, in an otherwise compelling theological and cultural analysis of medieval filth, claims that:

Until the plague of 1347-51, municipal efforts to deal with dung were largely concerned with its physical nuisance value: dungheaps encroaching on streets, cesspools eating away at walls, the dung from privies clogging up waterways and so forth.

Putting aside the fact that medieval societies rarely drew a neat distinction between physical and spiritual pollution, municipal efforts at containing the latter hardly sprung from Black Death’s well. Yet when even medievalists locate the birth of genuine public health in responses to plague, who could blame historians of the modern era for being equally myopic or teleological?

According to the previous line of argument, moreover, whatever administrative and intellectual process plague triggered or envigorated, it only came to real fruition in the establishment of health boards. These organs usually comprised a group of bureaucrats (sometimes accompanied by trained physicians) who informed and implemented government policy especially during pandemics or their threat. From this perspective, Milan and Mantua were early bloomers, with numerous Italian cities following suit in the later fifteenth century, before health boards began to proliferate in earnest across England, France and elsewhere. The distance traveled from these early
responses to their fully-fledged, rational successors was famously captured by Carlo Cipolla, an eminent figure in public health historiography. Spotlighting the fruition of processes undergone by Italian municipalities by the seventeenth century, he wrote:

If one compares the measures taken against the Black Death by Italian towns in 1348 with what I have described, one can see the progress that had been made in the field of Public Health over three centuries during which the plague ravaged Europe, endemically as well as epidemically. Permanent Health offices were created, permanent or temporary pest-houses were built, the use of health cordons and health passes was developed, a set of rules was worked out for quarantine and disinfection, and an elaborate network for passing information among towns and communities was established.\[95\]

Beyond implying a more or less linear process (undergirded by moral-political progress), Cipolla’s gives further credence to the notion that the real breakthrough can be identified in sporadic government reactions to the crisis of 1347-51, which eventually gained traction. As such it is premised, like numerous other studies in the field, on a teleological view of public health as a form of applied epidemiology. Working within this paradigm, Cipolla and others assume and prescribe what public health should entail and what kind of political and administrative structures must be in place in order to imagine it, let alone implement it, in a way that would resemble a modern system. In their quest for
the roots of modernity, medieval and early modern health historians thus inadvertently relegated earlier measures and policies to the realm of prehistory.

This common tendency does have exceptions, however partial and rare. For instance, early modern historian Mary Lindemann stresses that, when Black Death struck, “cities were by no means totally unprepared to deal with it: some public health measures were in place and, more important, many cities had robust and well-developed governments that responded with energy and imagination.”96 On the whole, however, even recent sympathetic non-specialists, who understandably rely on medievalists’ and early modernists’ critical input, tend to perpetuate Black Death’s reputation as a watershed moment. This has not always been the case. For instance, and as already noted, Rosen’s *A History of Public Health* does qualify its focus on plague by noting that leprosy led to the design of certain prophylactic measures, which later informed government policy during bouts of plague.97 Yet the insight is already lost on an otherwise congenial Porter, who argues that plague “stimulated the earliest direct involvement of civic government in the control and prevention of epidemic disease, [...]linking] the late medieval with the early modern world in a unique way.”98 Once again, the perennial focus on epidemic disease or other paroxysmal events obscures preexisting infrastructures and preventative programs.

Plague’s onset and its subsequent visitations were certainly consequential for diverse walks of late medieval and early modern life: lay piety, church administration, social relations, labor politics, land and commodity prices and of course public health. Yet those who harken back to the period 1347-1351 as an explanation for governments’ and peoples’ sudden, or indeed seminal, interest in community prophylactics, overlook a large body of evidence and a growing
number of historical and archaeological studies that challenge plague’s exclusive role. The fixation on Black Death also runs the risk of perpetuating a view of medieval communities as fatalistic about their own wellbeing to a degree that can only be described as comic. Did Florentines really observe the fast-rising water of the Arno in 1333 when it first struck them that shallow banks are a bad idea? Historians’ lingering focus on emergency activities and responses to epidemics is understandable, but it may reflect the obsession of modern national and international efforts at disease control and thus hinder a rigorous understanding of the contingencies involved in building resilience. Scholars’ reluctance to explore (and at times even posit) different paths, especially where the documents allow them to do so, seems to acquiesce in a view of medieval society as beset by ignorance, lethargy and a lack of creativity. The approach may well have served Monty Python, but it is one the following chapters expressly seek to disrupt.

Structure of the Book

Medieval Italians literally paved roads to health. They understood full well that safety and traversability (Italian: viabilità) on land and water, in both urban and rural areas, was key, not only to their economic success, but also to their growing communities’ wellbeing. Accordingly, they invested in plans, offices, physical infrastructures and legal procedures that would reduce pollution, promote the flow of traffic and ensure a sufficient quality of produce, air and water throughout their cities, with a range of implications for individuals, organizations and the population at large. A linchpin of this approach is a nearly forgotten but rather well-documented and ubiquitous public functionary called
the *viarius* or roads (or works or fields) master. The prologue to this book briefly introduced one such outfit, active in Rome from at least the early thirteenth century. In important ways *viarii* and the records they kept form the backbone of this book. Tracing their activities as purveyors of public works and—in consequence—as negotiators or enforcers of preventative health and safety policies, sheds much new light on how urban regimes and dwellers defined and pursued an ultimate good under regular (that is to say, not cataclysmic) circumstances. Their story augments and interrogates an image of preventative programs that is usually focused on emergency measures, often in the context of fighting famine, plague and other epidemics. It seemed helpful therefore to begin this book with a regional survey of the office’s history, based mostly on urban statutes, and to situate it within local administrations and preventative health discourses as they emerge from urban bylaws.

Beyond demonstrating that roads masters maintained a regular presence in Italian urban life, chapter one (“Roads to Health”) shows how magistrates fostered an link between *viarii*’s remits and populations’ health, safety, morality and general wellbeing. Roads officials rarely operated alone *pro maiori sanitate hominum*—for people’s greater health. Yet on a daily basis they were officialdom’s staple agents of healthscaping, and it is mainly through their reports, gathered during their daily perambulations throughout and beyond the city, sometimes instigated by complaints delivered to them, and shaped by their continuously revised mandate, that we can see one instantiation of how health in the Middle Ages was defined and pursued at the population level. In this sense, *viarii* are not necessarily the main or privileged protagonists of a new narrative,
but rather revitalized sources of information about preventative mentalities and in/activities in premodernity.

Tracing the proliferation and significance of this office between the early thirteenth and late fifteenth centuries, chapter one thus sets the stage for the detailed case studies gathered in the book’s second and main section, comprising chapters two ("Lucca’s Viarii"), three ("Bologna’s Fango Officials") and four ("Piedmont’s Camparii"). While the first two chapters deal with outfits that resemble Rome’s, the latter chapter orbits around the town of Pinerolo and underscores in particular the transfer of environmental surveillance techniques from the countryside into the city. Each of these chapters however excavates a hidden aspect of premodern healthscaping in a different sub-region. They move beyond the relatively well-known path of the institutional history of health and charity (hospitals, almshouses, leprosaria), the history of the medical profession and its progressively marginalized auxiliaries (midwives, barber-surgeons) and of course Black Death and responses to it, without in any way wishing to diminish from their overall importance for the history of health and medicine.

In Lucca, Bologna and Pinerolo, the extant registers compiled by local officials are among the richest of their kind for the peninsula, and as such they are likely the most detailed records for medieval Europe as a whole. Each chapter begins by tracing the local organ's institutional history at the normative level (on the basis of statutes mostly left out of chapter one), and then moves to explore their documents of practice. Prominent among the latter are roads masters’ own records, especially mission statements, announcements, lists of violations and fines levied and, where possible, trial records attesting government and individual responses to perceived environmental offenses
believed to be and/or framed as threatening population health. The data mined from these registers (which are especially abundant for Bologna) lend themselves to new kinds of spatial and statistical analyses of healthscaping that in turn allow us to trace continuity and change in violations (or at least prosecutions) and the social profiles of alleged violators. Above all, however, these mostly untapped sources unequivocally demonstrate the sheer scale of coordinated urban preventative programs, where these were thought either never to have existed even in theory or rarely to have been enforced, well before the onset of plague.

Chapter five ("Healthscaping Europe and the Premodern World") resitutates the previous case studies beyond the survey of viarri developed in chapter one. It begins by tracing the contours of further (and often non-urban) prophylactic programs in premodernity, first in Italy and then beyond it, namely in civic and military engineering and cenobitic monasticism. While deeply rooted in the Italian peninsula, mostly by virtue of an extensive Roman experience with them, all three traditions had both extensions and parallels farther afield. Accordingly, subsequent sections move briefly to spotlight preventative programs and discourses in other regions of Europe, the Middle East, Asia and the Americas. The latter sections offer no more than a thumbnail sketch, albeit one that underscores the overall unexceptional story of the Italian city-states from the broader perspective of premodern healthscaping.

The conclusion concisely restates what should by then be obvious, namely that medieval or indeed premodern public health is neither an oxymoron nor a strangely neglected subject. On the basis of insights gained from the specific case studies as well as their larger discursive and operative contexts, roads officials
and the programs they promoted were elements in more deeply-seated health programs and infrastructures. Their history in medieval Europe, and of other agents in premodernity more broadly, questions entrenched narratives of modernization, and allow us to be more specific and accurate about what the latter actually meant when it came to public health.
Chapter One
Roads to Health

Introduction
Roads and streets have long occupied students of culture and society, and with good reason. From Homer to Hildegard of Bingen, from Geoffrey Chaucer to John Bunyan and from Simone De Beauvoir to Cormac McCarthy, the road’s common use as a metaphor and a narrative structure purports to capture something quintessential about the human experience, casting people as *viatores*; while the street continues to evoke human settlement and everyday life in ways that other shared spaces rarely can.¹ Both places appeal strongly as meeting points for people of different backgrounds, in whatever terms those differences are cast: race, gender, physicality, ideological persuasion, faith, age, life-cycle or socio-economic status. They are the location of work-related as well as leisure activities (and idleness), sites of civic order and malaise, arenas of technological innovation and decline, backdrops to religious and spiritual change, stages on which cultural memories and political identities are inscribed and performed. Communities define themselves and label others also according to elements linked with streets, including their physical layout, material construction and the variety of social, economic and political functions that they invite or deny.²

Promoting health and fighting disease is likewise an embedded, if often overlooked, aspect of roads, streets and street life.³ Historically, numerous cultures saw the latter as strategic venues requiring active maintenance and protection, serving as they did to establish political elites’ legitimacy, the wellbeing of local populations, a settlement’s reputation or a combination
thereof. Medieval Europe, including Italy, is no exception. In towns and cities across the peninsula’s center and north, streets and roads (including waterways and nodal points such as gates and piazzas) served communities as controllable vectors and as backdrops for framing the approaching foreigner and local residents emerging from their homes and into a public area. As myriad urban governments, organizations and individuals routinely recognized, the potential impact of roads on local populations could be substantial: not only what people carried and wore, whom they met and how they behaved, or where they came from and were headed towards, but also the street’s condition and design could have or be perceived as having a beneficial or adverse effect on people's lives. Studying streets and roads thus offers crucial insights into the history of medieval community prophylactics, as sites for negotiating medical paradigms, political claims, social organization and cultural identity.

If urban health and safety were historically defined also in terms of cities’ quality of infrastructure, supervising it engaged a fortiori in healthscaping.4 Certainly, providing for urban populations and protecting their resources had multiple and partly overlapping agents and goals, which meant that tasking and delegating responsibilities remained constantly in flux, even from officialdom’s more carefully honed and better documented perspective. Environmental conditions and other contexts kept changing too: day and night, rain and drought, profane and feast day, war and peace, plague and respite—each circumstance (and their combination) grew and shrunk officials’ capacity to argue that they were promoting health and fighting disease for the community’s benefit. While medieval urban regimes were by no means the only entity in this period seeking to create, define and safeguard a public sphere, they were
relentless about staking their claim on a number of sites created at times by default, as boundaries between (often pre-existing) private and/or corporate properties, at others quite deliberately, through fabricating public squares, buildings, canals and markets. Moreover, as Italian cities extended their reach to other towns and into the surrounding countryside, rulers and ideologues came to imagine their territories also in terms of health, safety, cleanliness and traversability, and not only through a capacity to tax, engage in diplomacy and raise armies.\textsuperscript{5}

As the present chapter argues, urban regimes across Italy were highly attuned to the political and economic rewards of healthscaping, or at least of casting themselves as its main proponents. Governments touted the positive health outcomes of their policies frequently, also in order to define and expand a teething if ever-contested public domain and insinuate themselves into it, often at the expense of private, semi-private and corporate authorities.\textsuperscript{6} An analysis of these strategies and their attendant tactics, in other words, is also a study in medieval forms of governmentality and biopower. Both are traceable through examining the formation of preventative programs, the vicissitudes of their implementation and the presence of alternative or competing sources of health literacy and power/knowledge (see the introduction). The complex entities that Italian urban societies had become by the thirteenth century, and the environmental pressures bearing down on them, could make certain interventions at the central level seem more palatable and efficient than before. Yet such interventions were not always and everywhere welcome; there is ample evidence that apathy, disagreement and outright resistance to government initiatives were common, as we shall see. In revealing such tensions this chapter
thus also contributes to the ongoing interrogation of the alleged precociousness of Italian urban regimes, as it exposes another layer of power brokering that predates and accompanies cities’ fostering of communal ideologies and their transition into despotic rule (signoria). Last but not least, tracing continuity and change in legislation across the period 1200-1500 questions earlier scholars’ fixation with Black Death as a watershed moment in the history of public health. A longer-term view of preventative programs not only illuminates cities’ preparedness (at least in their own eyes) to face health hazards, but also helps explain why in most documented cases a century or more had elapsed between the second pandemic’s onset and the rise of urban health boards.

To do all this, the present chapter examines a large group of normative sources, namely urban statute collections. These texts, issued by scores of urban regimes spread throughout the center and north of the peninsula (see Figure 1.1), sought to regulate diverse aspects of social, political, cultural and economic life, from the election and conduct of communal officials, to civic and criminal law, to feasts, warfare and diplomacy. Of the texts examined below, virtually every single collection laid down some rules about public safety and general wellbeing, frequently in connection with the condition and management of roads and other types of infrastructure such as wells, walls, mills, markets and canals. In this sense the greater challenge was to limit the relevant sources rather than identify them, given the sheer number of statutes and their availability even when focusing on printed editions and digitized manuscripts. I pursued two guidelines in this respect, other than reserving sources concerning the book’s three main case studies to their respective chapters and striving for a reasonable geographical distribution: first, a preference for laws issued by cities whose
public health historiography is less developed for the Middle Ages or at any rate prior to the foundation of local health boards;\textsuperscript{10} and, secondly, a focus on printed editions postdating the mid 1990s, when Ronald Zupko and Robert Laures published their seminal survey of urban environmental law, likewise based on Italian statutes.\textsuperscript{11} Even after this partial filtering, however, we are still left with over one hundred and fifty texts (154 to be precise), dealing with 118 cities, towns and rural strongholds.

![Map of Italy with cities and towns marked](image)

**Fig. 1.1** Communes and road masters in central and northern Italy, 1200-1500

Road masters and their direct parallels in 84 locations have been plotted against the 118 settlements included in the present survey of 154 urban statutes.

Image by Alexis Rochat
The present book as a whole engages a far broader range of sources than urban law codes, in part because Italian archives (and material remains) allow us to go well beyond them, in part due to the methodological problems legal sources present. The former consideration will emerge clearly from the discussion of the sources in each of the following chapters. As for the latter, several observations are in order. First, urban statutes were composed by and largely reflect the agendas of local political elites, a group that, while far from stagnant or even homogenous in the period under examination, nevertheless represents a small fraction (perhaps 2-3%) of Italian city dwellers at any given time, and a wealthy one at that. It is thus helpful to bear in mind just how narrow and performative legislation could be, not only vis-à-vis upwardly mobile local residents, but also as regards regional elites and those governing other cities and territories. That is not however to reduce statutes to legitimizing documents, or texts whose historical significance bears mostly on the realm of cultural identity; after all, elites’ prestige depended strongly on their laws being obeyed and not merely composed.

A second issue is that, putting aside the question of enforcement, most extant texts (especially those in print) offer one redaction of a local law code, which in reality continuously changed. Approved legal additions and revisions took time to be incorporated into a formal redaction even as they impacted policy and practice. In other words, most of these texts offer a normative snapshot rather than reflect long-term trends in policy, and regardless of how in- or out-of synch they were with social practices. In order to be on firm ground even at the normative level it is therefore necessary to plow through all amendments and redactions surviving in local archives, and trace continuity and
change within them. This was certainly attempted in the next three chapters, but more sporadically in the present one given the limitations imposed on most of the edited series.

For many medieval cultures, normative texts (and archaeological remains) are the only major surviving witnesses, and as such they provide a privileged lens for later observers. That is fortunately not the case for scores of cities in later medieval Italy, whose rich archives preserve a plethora of documents of practice. These, while hardly free from destruction, intervention or bias, nonetheless illuminate urban life from further perspectives. For instance, legal anthropologists of these cities’ past do not have to draw information only from prescriptive sources, since ample court records are available as well: summonses, depositions, hearings, sentences, registers of fines paid and even of prison inmates incarcerated and released. On occasion, it is possible to step into or at least plausibly reconstruct the physical places in which some of these actions allegedly took place. That is not to argue that documents and instruments of practice are somehow more authentic witnesses or that they solely and objectively describe, whereas law codes’ use to modern historians is merely as prescriptive sources with little hold on social reality. Indeed, the boundaries between these categories are quite fluid, for instance given the disciplining intention as well as social impact of records of practice, not to mention civic architecture.

The present chapter, however, lays administrative sources temporarily aside. Two considerations led to this decision. First, accessing archival or out-of-print sources for the 118 settlements touched upon by this book—assuming that is a feasible endeavor in the first place—would require far greater resources
than studying statutes in print or online. I therefore decided to develop a small number of richly documented case studies, and the fruits of those investigations are presented in later chapters, where many of the available sources are brought into dialog with one another, testing some of the general hypotheses raised in the present overview. Secondly and consequently, canvassing a large number of statutes, which are still being edited and published today, offers breadth without necessarily compromising on depth. The insights provided by additional sources run the risk of being confined to highly local contexts unless they are situated within a larger framework, undergirded by an interconnectedness that is likewise well documented for this region and period. Despite their unique traits and trajectories, the Lucchese *viarius*, the Bolognese *fango* official, the Pinerolese *camparius* and others can also be understood in terms of a common peninsular context and (as the book’s final chapter in particular will show) a broader transregional culture of community prophylactics. The present chapter accordingly seeks to act as a firm but detailed backdrop to the specific healthscaping activities described and analyzed later on: an investigation’s point of departure rather than its terminus.

The present exploration of the medieval street (in the widest sense of the term) and its importance for the history of public health begins by looking at those officials, private individuals and institutions expected to care for it, prevent its deterioration and limit human and animal behaviors thought to compromise it. For, in doing so, they sought to defend the urban environment and protect society’s wellbeing. The chapter moves, always from officialdom’s perspective, from periphery or locality to center, that is to say from individual residents and households, to neighborhoods, parishes and administrative city units (thir...
quarters, “gates”), to central government officials. Among the latter, we
commence with specialists responsible for certain sites or types of urban
infrastructure (wells, aqueducts, mills, fountains, etc.), before proceeding to the
chapter’s central section, which deals with the urban roads master or \textit{viarius}. As
already mentioned, political centralization in this context also meant expansion
into the countryside, a process that will be briefly touched upon here and
elaborated in subsequent chapters.

The reconstruction of preventative programs and the identification of
their diverse agents in this chapter has three general aims. The first is to
illuminates a major, if hardly exclusive, aspect of medieval biopower negotiations,
namely attempts by and resistance to political elites’ quest to legitimate their
actions and discipline urban dwellers by explicitly stating and implicitly alluding
to positive health outcomes. To a certain degree, students of some cities and sub-
regions have been down this path before, discerning the presence of Galenic and
Hippocratic principles in local statutes and pointing out rulers’ ploys to expand
their jurisdictions on the back of human frailty or its omnipresent threat. My goal
here was thus mainly to place such findings more unequivocally than before
within the framework of governmentality studies, including their emphasis on
multidirectional power vectors, and apply the approach on a large regional scale
in order to establish the presence of political solutions to problems cast at the
population level. Drawing one type of connection between various techniques
promotes the second goal of this chapter, namely to situate the urban roads
official (and his partners and parallels) as a central yet mostly understudied
subject in the history of premodern public health. In doing so, this chapter hangs
a backcloth to the more intensive interrogation of further sources relating to
roads officials’ activities in three specific cases, developed in the main section of this book (chapters two through four). We begin, however, by pursuing the chapter’s third goal, that is, establishing the presence of both health discourses and agents at the intersection of urban public and private spheres.

Private and Public Spheres

Urban architecture is a normative agent. It consciously seeks to shape the physical and conceptual boundaries between the private and the public, the domestic and the communal domains. Later medieval Italy is a case in point. As Richard Goldwhaite has shown, the proliferation of Florentine palazzi in the later fourteenth century proclaimed a new vision and a new set of practices related to family and civic identity, thereby redefining notions of privacy and domesticity. Seen from a public-health perspective, however, even such a marked shift left private homes vulnerable to government incursions as well as polluting activities others carried out. Conversely, it had a limited capacity to prevent hazardous excursions, that is, curb the impact of dangerous domestic behaviors and matter on the population at large. In other words, not only status but also a biopolitical negotiation manifested in the design of diverse architectural elements, from thresholds (windows, doors, balconies) and their ensembles, to kitchens, gardens, latrines, cesspits and hearths.

Drains offer an even more powerful illustration. Alluding to long-accepted wisdom on the matter, Leon Battista Alberti (1404-1472) wrote in On the Art of Building that he “need not stress here how important drains are in maintaining the sanitation of the city, the cleaning of buildings, public and private alike, and toward preserving the wholesomeness and purity of the air.” Indeed, he need
not have. By the fifteenth century it was common knowledge that drains (and gutters and sewers) leading filth away from domiciles and out of the city could not only help preserve health but also reinforced a private/public divide. Yet in physically straddling the very boundaries they were meant to trace, such vessels simultaneously reify a private excursion into public places and attest the success of a government incursion into the private home or guild hall. The tension is especially evident when the very existence of drains and even their technical specifications were prescribed from the political top down, perhaps based on engineering expertise and couched in terms of public health and wellbeing, much like with sanitary building standards today.

Social organization and medical theory were thus important but not exclusive factors in establishing where medieval public healthcare interventions may physically and legitimately start. As we shall see, quotidian artifacts such as drains, windows and even bells also operated as links in the programmatic chains shaping human and animal behaviors, and they certainly sought to frame the latter as beneficial or hazardous from a public health perspective. These, along with local property laws and the effective length of a regime’s reach, decided where and how individual preferences and private privileges would succumb to the needs of the many. Accordingly, legal and other types of prescriptions about urban cleanliness made at least implicit (and occasionally explicit) disciplinary demands on the domestic sphere as well as the corporate and public ones, and these often took the form of physical interventions in domestic and guild architecture or human and animal behaviors in private and semi-private spaces.
Contrary to medieval governments’ modern reputation as apathetic to such issues, numerous statute collections, redacted between the early thirteenth and the late fifteenth century, construed various matters, sites and activities as posing health and safety hazards that upset neighbors and placed passersby at risk. Homeowners and residents, for instance, were expected to clean the exterior fronts of their domiciles and ensure that adjacent streets and waterways remained navigable at all times: that wood piles, work tools and dirt did not block human and animal traffic, be it on land or water. There was an equally if not more serious threat, however, and it often emanated from within private residences, as Alberti’s passage alluded to, or from corporate compounds, as we have seen in the book’s opening anecdote concerning Rome. In 1296 Spoleto, for example, residents were required to enclose drains and latrines running from their homes and onto a public street for a distance of ten pedes (about 3.5 meters) in order to prevent filth from being visible to neighbors and by implication reduce the risk of disease by intromission. Otherwise they were to face a fine of 25 lire. And in Ravenna, a prohibition dating to 1327 on discarding trash and excrement applied to any public street, square and gutter where “passersby might be harmed” (transeuntes possint offendi).

While neither text obligates homeowners to sink gutters within their property or store trash and feces as they would in public, both convey a clear message about the danger involved in not doing so. Such promulgations, in other words, fashioned a rather permeable boundary between private and communal space from a health perspective and by appealing to a sufficiently familiar medical discourse. Nor did authorities take too many chances with residents’ degree of medical literacy. In Bergamo, as elsewhere in this period, heralds
announced prohibitions on littering in public and letting pigs run loose, yet they also communicated about best practices in burning dung, an activity that could take place inside one's atelier, kitchen, on one's roof or terrace.\textsuperscript{22} Once again, such bylaws and their public announcement implied that protecting communal wellbeing required controlling the movement of matter, bodies and scents (and hence, water and air) across an otherwise seemingly strict private/public divide.

With similar goals in mind, legislators in 1394 Castelfranco di Sopra set fines for creating blockage, neglecting to clean before one's house and workshop, leaving trash within or directly outside the city's walls and gates, and causing intentional damage to local infrastructures. As is typical throughout the era's statute collections, moreover, residents are warned not to dispose of nightsoil (\textit{acqua bructa}) from their windows and balconies before the third bell rang, which inaugurated the nightly curfew; and even then, they had to alert passersby three times of the impending downpour with a loud voice: “tre volte ad alta voce: Guarda, guarda, guarda.”\textsuperscript{23} (From an ANT perceptive this rubric also illustrates the defining role that could be played by non/human sound as well as material thresholds in endowing certain actions with the meaning of a health threat and reducing its potential in others.) Nor was this a unique case: the formulation can be found almost verbatim in Montepulciano's 1337 statutes as well,\textsuperscript{24} and in similar form in statutes from across the peninsula.\textsuperscript{25} Last, Scarperia's legislators in the fifteenth century strongly admonished residents against placing on a public road or in their own homes and yards matter that “could offend or cause injury to the neighbors” (\textit{offendere o a 'vicini fare ingiuria}).\textsuperscript{26} Here too municipal authorities were ostensibly seeking to patrol a physical boundary between
private and public domains, yet in practice they valorized certain activities squarely within the domestic sphere.

The regularity of such clauses also spotlights regimes’ awareness of monitoring behaviors related to latrines as a possible way to reduce harm. Controlling the movement of fecal matter is a staple of social organization and hence of biopolitics, since excrement could, in Susan Signe Morrison’s words, “both undermine or disturb and confirm ideas of ‘normalcy’ (cleanliness) and bodily completion.” Excrement, moreover, was both physically and morally dangerous in medieval society, since rather than merely symbolize sin or its consequence it actually embodied it, as Martha Bayless has recently shown. Small wonder that latrines could put neighborly relations under serious stress and be seen as placing urban wellbeing at risk. Aspra’s 1397 statutes accordingly ordered that any latrine owner must “clean it so that it does not harm anyone’s house or men or persons present on public roads and squares,” or else risk a 20-soldo fine. On the other hand, loci privati were also known as necessaria, and not only for personal hygienic reasons. Already in the early thirteenth century, Volterra’s consuls and podestà were instructed to install public latrines wherever they deemed it good and useful to the city’s residents. And Cittadella’s fourteenth-century legislators averred that a latrine is “very useful” (valde utilis), especially where there is a “multitude of people” (multitudo hominum gencium). Protecting community wellbeing, often under growing demographic pressure and the threat of disease, was thus perceived as having to balance between individual-biological and social-biological needs. In fact, this is precisely what the subsequent rubric in Cittadella’s statutes sought to do by offering a positive blueprint for building safe and shared latrines where there is
“an abundance of neighbors” (*copia vicinorum*). Latrines’ introduction, therefore, was a mixed blessing, solving some social, spiritual and environmental problems while potentially exacerbating others. For urban regimes trying to defend their legitimacy, medical authorities seeking recognition and individual households striving for agency, however, it was a new and useful (if perhaps pungent) place into which they could insert themselves by disciplining others.

Human waste was only one of several matter-groups dealt with by legislation on urban wellbeing. In Figline, the 1408 statutes assign the podestà general responsibility for the city’s cleanliness, but they repeatedly admonish residents against blocking roads by keeping dung (which usually meant animal rather than human excrement) or firewood outside their homes for more than two days. They also had to clean their home fronts (usually a street or a passage under a portico) and adjacent squares every Saturday, and refrain from leaving carcasses in public ways (except in the Arno, downstream from the city), throwing filth from the window at any time (except when it rains), drying skins, letting pigs run loose and allowing latrines to drain freely onto public ways.

Likewise in the late fifteenth century, Dronero’s residents continued to be warned lest they put the town’s people and material resources at risk. Underscoring urban-rural spatial and administrative continuities, the town’s 1478 statutes insist that anyone in possession of a field must ensure its proper drainage, so that water does not harm (*noceat*) their neighbors or public roads; and that no one may allow a latrine to evacuate onto or even near a public road in a way that would permit excrement or any other horrible refuse (*extercora vel aliquid aliud oribile cadens*) to be seen by passersby. A fine of three soldi would be imposed on anyone littering the street with feces, blood, skins or dung, or
anyone letting a sow or its piglets roam beyond the household. Watering animals at communal fountains and washing clothes in them would be punished by a fine of twelve denari.\textsuperscript{35}

The statutes’ particular attention to pigs, and especially their meandering beyond the domicile, is perhaps worth explaining given pigs’ modern reputation for laziness. Unlike cattle raising, pig husbandry in later medieval Europe gradually transitioned from forest to city. But despite this widespread process, which also impacted pigs’ physiognomy, they were still perceived as more akin to their aggressive wild-boar ancestors, and thus as threats to urban wellbeing.\textsuperscript{36}

The most serious instances concerned pigs allowed to run loose in droves that could damage people, property and produce, but they could occasionally be construed as miasma-producing agents as well (see below). Some legislators denied pigs entrance to their cities categorically, while others framed their unsupervised presence outside households as dangerous in specific periods, for instance when sows were in heat or new litters were being delivered. Swines could also pose threats to themselves while menacing others. The image below accompanies a new market ordinance issued by the general council of Pistoia in the late fourteenth century. It forbids butchers from tying pigs’ hind legs at the Mercato della Sala, the city’s main retail space, or burdening them with a stone weight, as depicted here. The measure aimed to prevent harm in two ways, since pigs could break their own legs while trying to flee when tied in this way, and because in doing so they were likely to cause damage to their surroundings by tossing around extra weight.
Butchers were sometimes forbidden from tying pigs' hind legs to a weight, as seen here, in order to restrict their movement, to prevent the animals from breaking their own legs or swinging further weight at their surroundings when they tried to escape.

Source: Archivio di Stato di Pistoia, Comune, Raccolte 5, fol. 225r (late fourteenth century).
Image by the author
By kind permission of the Ministero dei beni e delle attività culturali e del turismo—Archivio di Stato di Pistoia, authorization no. 767 (28 March 2018).

Disciplining individual households was only one way in which urban magistrates tried to establish biopolitical legitimacy and visibility and train more eyes on the street to promote a desired conduct. Statutes routinely encouraged parishes, neighborhoods and administrative units such as quarters, as well as corporate entities like guilds, hospitals, confraternities and convents to take part in defending the nexus of health, safety and traversability. Hovering between the
semi-private and public spheres, these diverse urban constituencies shared both resources (especially water and air) and sites (piazzas, wells, streets, markets, walls, troughs, gutters and gates), all of which required preventative care and regular upkeep that could be managed locally, as statutes constantly confirm. How such entities specifically went about doing so depended on a combination of internal and external factors: a city’s topography and morphology, administrative traditions, and the appeal of good neighborliness as a pious duty on the one hand, and famine, disease and war or political instability on the other. Pistoia’s 1296 statutes, for example, ordered the election of four men, one from each of the city’s gates (porte; Pistoia’s basic administrative units), and charged them with collecting and removing rocks from their respective neighborhoods “so that children will not have stones to throw at one another and horses will not be hurt by them when they race or persons standing to watch them race.”37 Trequanda’s 1369 statutes determined that each of the town’s thirds (terzi) should appoint one man to clean its fountains and streets every April.38 In 1394 Castelfranco di Sopra, groups of residents were encouraged, by means of a generous subsidy of two gold florins, to dig wells and build fountains in their own locales.39 And in 1458 Como, every parish was held directly responsible for maintaining its cemetery, in a way that avoided imperiling local residents.40

Cities’ topographies and morphologies varied greatly, shaping different historical trajectories of local jurisdictions. Accordingly, governments’ spatial expansion is rarely linear or perfectly centrifugal, as the degree of their direct control over parish (and even central) facilities waxed and waned. The fluidity of such processes did not stop magistrates from claiming certain territories in full, however. At its most rudimentary form, small settlements such as Monastero San
Eugenio obligated residents, under a fine of ten soldi, to answer at any time the capitano’s call to clean the town and its environs. In late thirteenth-century Fossato, the vicar and sindaco took responsibility for surveying the state of the town’s wells, bridges and roads. In 1331 Bergamo, the vicar had to maintain all streets and roads, including by burying gutters underground and punishing offenders, as did his counterpart in Cuneo at least from 1380. And in fifteenth-century Ala, all matters pertaining to roads, waterways, walls, boundaries and buildings that required a visual inspection (ad oculum) were to be resolved immediately by local executives, the sindici or massarii.

These and similar prescriptions are usually succinct or else mostly silent about what resources were to be allocated for such purposes and whether the political circumstances made direct control practical or even feasible, and not just desirable. The text are abundant but they disclose little about outright resistance to these bylaws, although they sometimes implicitly try to preempt it, either positively, for instance by offering to share with accusers the sums extracted as fines from offenders or through the threat of fines for neglecting to report violations. It is likewise plausible that what some statutes magnanimously present as a delegation or devolution of control from center to periphery, in fact amount to a recognition that the regime lacked sufficient influence in this sphere. Conversely, listing all types of infrastructure as falling under a podestà’s direct control may have amounted to little more than inventorying or wishful thinking, a norm never expected to be upheld, at least not by a central government organ.

Health Discourses and Agents
Having discussed the challenges facing governments in their quest to legitimize incursions into the private and domestic spheres, and before moving to explore how these shaped the office of the *viarius*, let us briefly examine the role that health discourses played in official promulgations. While hardly ubiquitous, certain passages in the statutes attest a biopolitical brokering in which *viarii* and other urban officials were thought to be involved, as legislators cast their preventative programs in terms of improving health outcomes. For instance, when Pistoian legislators prohibited certain artisans in 1296 from working within the city walls, they couched their argument in no uncertain terms:

> Since it is civil and expedient for the preservation of people's health that the city of Pistoia be cleared of stenches, from which the air is corrupted and pestilential diseases arise, we establish with this law that no artisan can or must exercise his craft or carry out any work from which stench arises, within the walls surrounding Pistoia. Rather, he must carry out such craft and labor beyond the city's walls, whence stench cannot reach Pistoian citizens. And no putrid matter, from which stench may arise, may be kept in any shop or discarded in any public road within with city's walls.46

The passage conforms to Hippocratic and Galenic medical theory, according to which air purity and by implication public health is compromised by foul odors.47 A shared understanding of such theories, at least among Latin reading elites, made invoking them a useful way to denounce violations by private persons or guilds in the name of civic decorum, safety and health.
In Padua, likewise, an addition from 1308 to an earlier statute regarding waste matter and drains (*De immundiciis et cloaclis*) forbids the placement in or near the communal *palazzo* of any refuse and carrying out any activity involving filth or odors that might “disturb the health of people or may bring disease upon them” (*aliquis malus odor seu aliqua immundicia fiat propter quam turbetur sanitas hominum et evenire possit aliquid infirmitatis hominibus*). L’Aquila’s leather workers were similarly prohibited in 1315 from operating within 100 *candas* (about 210 meters) of the episcopal palace, royal palace and communal square, “because the tanning of skins infects the air and disfigures the city” (*quod molza pelliczariorum…aerem inficit [et] Civitatem deturpat*); and local dyers were discouraged from pouring tainted or otherwise putrid water “from whose stench their neighbors and other passersby could be hurt” (*unde vicini eorum, et alii transeuntes exinde, ex fetore predictorum offendit*), under pain of three *tarenos*. Lastly, preventative healthcare was also declared the responsibility of the Florentine podestà in the city’s 1325 statutes:

In order to purge the city of Florence of stenches from which the air is corrupted, and on account of which diseases arise and arrive, it is stated and ordained that no dyer or any other person may dare or presume to throw, have thrown, or keep putrid or murky water, or any herbage extracted from dyers’ vats or tubs on public streets, or in the city’s pits, or in other uncovered pits in the city of Florence...Nor may anyone lead it uncovered through public streets or any other place.
These rubrics’ appeal to miasma theory, well before the onset of Black Death, was a routine affair, as we shall continue to see throughout the present and subsequent chapters. As such they attest not only the longer trajectory of medieval public health history, but also the targeted deployment of learned traditions in policy stipulations. But was such recourse disingenuous, a mere ploy to increase residents’ attention and compliance? And if not, was it tied to a feasible preventative endeavor? Were urban magistrates actually able to act upon the medical principles they so powerfully invoked on the basis of sufficient resources and willing participation? Most public health historians, perhaps burdened by the albatross of modernity, tend to agree that urban governments had neither the resources nor the traction to implement their public health programs (if such they were), as laid out in the bylaws. Even the most sympathetic among these scholars surmised from normative texts that rulers were either hopelessly ambitious or else insincere about healthscaping. As subsequent chapters will show, however, there is far more evidence than law codes for evaluating regimes’ capacity for implementing these programs, much of it overlooked.

For our present purposes, however, it suffices to note that rulers and city councils did take public wellbeing seriously, at least in the sense that they saw in population-level health both a problem and an opportunity to define urban biopower relations. Magistrates accordingly devised plans and allocated resources to enforce them, and they expressed their intention to take individual citizens, visitors and urban guilds to task for undermining public health. Acknowledging this, as the introduction to this book already stressed, is in itself a major shift within the historiography of public health, where outside of
specialist circles the view of a chaotic, apathetic and ignorant Middle Ages still holds sway.

However long or short their reach into domiciles, parishes and neighborhoods, urban governments claimed direct responsibility for—and thus sought to appropriate—certain sites, resources and facilities. In Montepulciano, for instance, a cleaner of the communal square was installed from at least 1337, a duty he was to carry out every Saturday.\textsuperscript{51} Florentines elected two men to clean the city’s wells once annually.\textsuperscript{52} The Ravenna statutes of 1327 gave a tax collector the additional responsibility of cleaning the communal square at least twice a month.\textsuperscript{53} And the latter’s peers in Figline were likewise required to clean the market square four times a year, during the major feasts of All Saints (1 November), Christmas, Easter and Holy Cross (3 May).\textsuperscript{54} Fountains are another case in point. L’Aquila’s famous \textit{Fontana della Rivera}, known today as the \textit{Fontana delle Novantanove Cannelle}, had its own guards,\textsuperscript{55} as did Perugia’s acclaimed \textit{Fontana Maggiore}.\textsuperscript{56} The guards’ duties at L’Aquila, however, usually ended with protecting the site against damage and did not involve its active repair or maintenance. The division of labor in such cases emerges clearly from the statutes, which hold other officials responsible for repairs or call for ad hoc appointments. In early 1315 L’Aquila that duty fell to the city’s chief executive, or chamberlain, who could also fine anyone for throwing waste in the water’s path leading to the fountain.\textsuperscript{57}
L’Aquila’s famous fountain, like other prominent nodal points of urban infrastructures, had its own guard, while other specialists were charged with its upkeep and defended waterways leading to and from it from becoming clogged.

The management of at-risk infrastructure is commonly attested in numerous legal sources, however succinctly. The statutes of Spoleto in 1296 named one custodian of the fountain, one custodian of the aqueduct and two men responsible for clearing the Piazza Santa Maria and the Campo Fori, respectively, at least once a month or more often if necessary. Their privilege of being able to charge litterers and collect half the fine suggests they were expected (or at least encouraged) to be at these sites even more frequently. In early fourteenth-century Orvieto every fountain and trough had to have a designated guard, who could charge litterers and collect half the fine.
procurators in 1327 had to clean the streets at least once a year, bury gutters and keep waterways clear at all times. And in 1391 the chamberlain of Santa Maria a Monte was instructed to clean the town’s main water vessels every August. Bra’s 1461 statutes are by comparison more expansive. They demanded that the council ensure the city’s wells, fountains and troughs are regularly fixed and cleaned. Yet it is unclear whether such assertions about the publicness of these sites actually rendered them accessible to all residents and visitors, or simply provided protection locally as part of a wider strategy of presence and expansion. It is unlikely, for instance, that defensive ramparts—a public facility par excellence—were equally or even easily accessible to most urban dwellers. Paradoxically, therefore, rendering a resource public or communal could in fact justify the restriction rather than expansion of access to it in the name of public safety, health and wellbeing. Nor was it the only irony attendant upon the statutes’ spirit. Government expansion of public hygiene services simultaneously marginalized certain service-givers or filled new offices with recognized social deviants, especially in the case of street cleaners and dung removers. In several Tuscan towns, for instance, game masters overseeing government-approved gambling did so at the cost of being roped into cleaning out cesspits.

Viarii and camparii

Beyond targeting certain sites and urging rulers to keep cities clean, communal statutes document the creation of government bodies charged specifically with maintaining a group of urban infrastructures, often bundled under the category of “works” (opera) and more commonly “roads” (vie). Given roads’ and streets’
importance in promoting communal health, as illustrated in the previous sections, those who monitored them (viarii; and, indirectly, podestà) played a key role in healthscaping urban Italy. Most of the cities issuing the statute collections informing this chapter began to designate roads masters sometime between the thirteenth and the late fourteenth century, although in some cases the earliest extant documentation dates to the fifteenth. A variation of this practice, apparently more common north of the Po River than to its south, was to employ a camparius or field master, with a similar or at least significantly overlapping remit. For, despite its ostensibly rural connotation, the appellation was in fact that of an urban official directing his gaze at a town’s hinterland and its infrastructural nodal points which increasingly served cities. The rural/urban divide was rarely fixed or clear in later medieval Italy, as underscored by this officer’s mandate to supervise extra-urban water vessels, bridges and roads connecting city and countryside, but decidedly owned and organized by the former or at least predomniantly to its benefit. As chapter four in particular will show, however this state of affairs came into being, the camparius is of particular relevance to healthscaping history since his jurisdiction often came to encompass urban infrastructures as well and consequently preventative practices associated with them.

Whatever their title and specific remit, these officials began to dot the peninsula’s administrative landscape in a process that was neither linear, nor concurrent across cities, let alone inevitable; and wherever it took place, topography, culture, politics and economics influenced its pace and timing, which in turn reflected broader shifts in environmental conditions. The chronological diversity of at least normative sources makes it difficult to establish specific
causes for these offices’ creation, or observe minimal conditions for their rise, although it is fairly clear that plague’s onset in 1347-48 was not one of them. The revival, especially in Italy, of Roman law and the intensified transmission and study of ancient medicine since the twelfth century could certainly have drawn attention to the importance of maintaining public infrastructure from a prophylactic perspective as well. Yet here too it would be hasty to draw a causal link between these well-documented intellectual developments and urban healthscaping, with the possible exception of Rome and the central Italian towns that housed the papal curia since the later twelfth century. Indeed, as Patricia Skinner has shown, centuries before the so-called School of Salerno came into being, rulers paid attention to urban sanitation and to some degree practiced it in that very region.

On the other hand, demographic growth and commercial interconnectivity following and enabling urbanization likely rendered the condition of roads and waterways between settlements as well as those within them a more pressing concern. Finally, to follow Bruce Campbell’s suggestion, it is also possible to postulate a revitalized concern for the resilience of urban (and rural) environments from the later thirteenth century, as climactic change began to exacerbate growing social, political and economic tensions, as inscribed on communities’ physical makeup. All these, along with a desire to keep up with developments in other cities for reasons of prestige, and the common nexus of order, health, cleanliness and piety discussed above, may have led local regimes to institute new specializations. It was at any rate essential that they had sufficient funds to do so, a contingency that can be surmised from the constantly changing sizes and compositions of podestà’s entourages. Whatever the specific
combination of factors that triggered it, the rise of the urban roads master reflects a convergence of accumulating expertise in the hands of individuals or groups on the one hand, and a strong desire for centralization on the other. Whether or not these developments reflect a new legal, medical or physical sensitivity to communal resilience, they certainly underwrote a transition from ad hoc appointments to regular positions, which urban rulers kept manning for centuries.

The transition—or certain elites’ preference for it—is easier to detect where early statutes have come down to us, as in the case of Treviso. Here, sometime after 1207, the podestà had to appoint two men from each of the city’s quarters to deal with “the roads, streets, and squares of the commune” (de viis et stratis et platheis comuni civitatis), an instruction repeated verbatim in a slightly later addition to the statutes. By the 1230s the city’s quarters were no longer mentioned (although they may have been implied) in the revised statutes’ instructions regarding the election of four men responsible for clearing the roads “so that the usual course of water through the streets will not be impeded” (ita quod consuetus cursus aquarum non impediatur in viis). The centralized election (per rodulum) of these men is unexceptional in the context of maintaining Treviso’s infrastructure. A subsequent rubric orders the election of another group of four men, also elected pro rodulo, to oversee a distinctly streamlined campaign: once every three years all of the public works (omnes publice) in Treviso and its hinterland were to be inspected and repaired, as were water facilities considered to be public (aque que publice sint) and bridges built on public roads (in viis publicis et stratis). Whatever they achieved on the ground, the magistrates behind this programmatic text were clearly bent on claiming
certain sites and spaces as communal, both within and beyond the city walls, and
their strategy in doing so entailed creating a central, if still temporary, organ. By
the early 1280s, all public facilities within the city were placed under the
jurisdiction of a new and permanent office of public works (officium
publicatorum), which was given a very similar remit.76

It is probably no accident that the latter transition coincided with one of
the earliest invocations of medical theory in the context of urban order and
cleanliness. In the very same redaction of the Trevisan statutes, to wit around 60
years before the Black Death struck, a rubric dealing with waste disposal
underscores the importance of removing dung and other forms of filth
(ledamen...seu etiam alias immundicias) in a timely manner, because these
substances “infect the air and create a pestilence, on account of which human
bodies become infirm and even lead to death” (talia aeram inficiunt et faciunt
pestilentem—propter quod hominum corpora ad infirmitates veniunt atque
mortem incurrunt).77 Invoking miasma theory was not an isolated event, as we
have already seen. Nor was it a single instance within Treviso’s statutes. An
early-fourteenth-century addition to the statutes admonishes against allowing
pigs to roam the city freely, not because they threaten the physical safety of
passersby, as one might expect, but since they pollute the air and “from the
infection of the air, a great danger befalls people’s health” (quoniam ex infectione
aeris saluti hominum grande preuidicium infertur).78 The magistrates’ concern
may well have been genuine, yet it is plausible that they mobilized a health
discourse also in order to legitimize what some could view as an incursion into
sites and activities heretofore managed without their help.
Padua offers an alternative trajectory to Treviso’s seemingly Weberian juggernaut. Here too, sometime between 1265 and 1276, legislators decided to abandon the recruitment of occasional laborers, opting to nominate a podestà of works. Yet the effort to centralize the office may have backfired. The following year, the single officer was replaced by an elected committee of twelve viarii, three from each of the city’s quarters, accompanied by four notaries of the same provenance. In 1298, the number of supervisors (soprastantes) working with the main officer (iudex) were reduced to four, one from each quarter, a composition still attested in 1309. To take another example of offices seesawing between center and locality, the 1286 Pisan statutes likewise originally called for the appointment of one supervisor of the canals and aqueducts, who had to be a technically adept foreigner, and by 1337 this official came to be known as the operarius generalis in charge of the roads, canals and aqueducts. However, a slightly later amendment to the statutes required him to engage four other men, one from each of the city’s quarters, in order to determine and supervise his work locally.

These cases illustrate as well as complicate what anthropologist James C. Scott described as premodern urban quarters’ perennially confusing nature to outsiders, a situation that called for local experts or guides to render them legible, in the broadest sense of the term. Viarii, especially when elected as gate or quarter representatives, certainly acted as mediators between their constituency and foreign rulers or centralized offices. Yet in that capacity they could have both promoted and subverted a ruler’s desire to reduce urban complexities to a manageable size, including the ideal condition, layout and flow of road and water networks. He would have also been in a position to challenge,
however informally, whose prerogative it was to interpret the statute on these complex matters. Conversely, when viarīi were sometimes instituted as centralized officers, it is difficult to typify the premodern urban quarters they supervised as opaque to central regimes. Even when viarīi were temporary and indeed foreign officers, they usually came equipped with a specific maintenance and development program that was deeply informed by local conditions and usually agreed upon well in advance by a local council or committee. In other words, in numerous cities across Italy, legibility was not as limited a commodity as Scott tends to allow for premodernity as whole.

At any rate, statute collections and other documents strongly hint at the power struggles behind this particular scene, with different cities arriving at different and often temporary solutions for sharing power between center and periphery, old and new elites, public and private interests. For instance, similar pendulum swings may have been avoided in Perugia, where legislators seem to have reached a workable compromise. The city’s 1279 statutes (the earliest to have come down to us) list among the podestà’s entourage one judge tasked with maintaining the city’s “roads, bakers, grocers, and of cleaning fountains, maintaining, building and improving them wherever needed” (viis, panicoculis, piçicarellis, et super fontibus reaptandis et reinveniendis, murandis et meliorandis ubi fuerit opportunum). He also had to search for loose pigs, establish the causes of filth in the city’s squares and punish offenders up to 100 soldi for each violation.

The broad remit of Perugia’s iudex viarum, which strongly resembles that of his Lucchese and Bolognese counterparts, as we will see in later chapters, meant that he had to aspouse a collaborative spirit, however. As a subsequent
passage stresses, this official was expected to work closely with five salaried 
viarii and their notaries, each hailing from one of the city’s five “gates” (porte). 
While the formal hierarchy within the office is evident, the text suggests that the 
communal roads master was at least as accountable to his putative underlings as 
the other way around. In other words, founding centralized offices did not 
necessarily entail the concentration of executive power in fewer hands, let alone 
secured upwards accountability.84 Further evidence of political negotiations 
comes from Trequanda. Here, the priors’ annual nomination of communal viarii, 
who were responsible for the upkeep of roads and bridges in and beyond the 
town (dentro et di fuore di Trequanda), did not come at the expense of the 
terzieri’s own appointees, each with a local remit.85 And in Rome, where viarii 
are attested from at least 1227, scions of the city’s elite families, who regularly 
manned the office throughout the thirteenth century, all but disappear from its 
rosters with the rise of popolani forces in the early fourteenth. Yet the office itself 
seems to have been fairly centralized from the outset, and regularly dealt with 
violations of norms regarding waste disposal, tainted water and access to public 
ways and spaces.86 

If domiciles, parishes and neighborhoods were already important agents 
of healthscaping, what paths were open to new and centralized organs such as 
communal viarii? Part of the answer lies in governments’ ability to coopt 
traditional practices. Roads officials mostly emerged from among a pre-existing 
group of infrastructure specialists, often focusing on one type of facility (e.g., 
fountains, wells) or resource (water, for the most part), and which served or 
claimed to serve a large part of the urban population even as they were 
nominated by or for a specific administrative unit. Certainly these outfits varied
widely from town to town, and their coverage of central or public sites was not always complete, to judge by the extant statutes. Yet they are routinely attested, and to the examples of specialists given at the end of the previous section one can add Ivrea’s sorestani of latrines and gutters,\textsuperscript{87} Colle di Val d’Elsa’s supervisors of walls and ditches,\textsuperscript{88} Rieti’s aquotorii,\textsuperscript{89} Bergamo’s water custodians (\textit{uomini...ad custodiendum aquam comunis Pergami})\textsuperscript{90} and Feltre’s \textit{officio disgrossatorum}, whose remit included the commune’s canals, aqueducts, gutters and any water-related site.\textsuperscript{91}

The inertia of administrative traditions, combined with magistrates’ concerns about local disaffection or even resistance, may lie behind the statutes’ common opacity on such matters. Even when providing a fairly comprehensive list of sites at risk, many texts avoid spelling out exactly how they were to be maintained. The small league of towns led by Borgo San Lorenzo di Mugello, for instance, obligated each constituent settlement to appoint “workers and officials” (\textit{operai et officiali}) to monitor local markets, squares, roads and bridges, which the statutes, likely alluding to an established tradition, define as an “act of charity” (\textit{atto di misericordia}).\textsuperscript{92} Yet the text refrains from setting standards of cleanliness or upkeep. Nor does it specify the men’s terms of appointment, privileges or even salaries, which are fairly common stipulations for other offices in the same text. This could have been an oversight, of course, but it more likely reflects a preference for flexibility and generally applicable regulations, on the one hand, and a felt need to steer clear of an overly confident tone about a factotum organ, on the other.

Notwithstanding such reluctance, numerous statutes issued from the thirteenth century onward do name roads (and water and field) masters,
supervisors, custodians or simply *viarii*, either as the sole or main officers in charge of the city's infrastructure. As in Perugia, so in Viterbo, several rubrics in the 1237-1238 statutes assign the city's *balivi viarum* what were evidently considered related tasks, namely the supervision of domestic waste disposal and keeping the city's roads and waterways clear and its walls intact. A later redaction, dating to 1251-1252, further organizes these duties into a more streamlined office, now with regular cleaning staff, perhaps as a way to obviate a need to rely on local residents. In Pisa, the 1286 statutes call for the election of one man responsible for “[building?] extensions and aqueducts” (*aldis et aqueductibus*), whose remit covered the city's hinterland as well. Sambuca elected a roads and water official in 1291 at the latest, who was charged with overseeing a range of policies regarding cleanliness and traversability, and invested with powers to mobilize the entire town population (*totum Comunis*) for these purposes. With a similar remit in mind Piacenza’s 1323 statutes called for the annual appointment of a *iudex stratarum*, to be aided by a notary and a lay person. And Montepulciano provides another example with the call, in its 1337 statutes, to elect one roads notary (*notarius viarum*) for a term of six months and at a salary of 50 lire. Accompanied by one salaried servant, this notary:

Will be a [city] official and have as a remit all streets, roads private and public, bridges, fountains, rivers, streams, estuaries, wells, ditches, canals, cisterns, troughs, wash basins and any and all works, maintenance, and repairs necessary in the land of Montepulciano and its district. And both
in carrying out [this office] and charging or punishing [violators] he will have the full duty of a *sindicus* or his notary.

Furthermore, to ensure *viabilità* and protect property, Montepulciano’s *viarius* may charge local residents maintenance costs and fine them for neglect or destruction. To anticipate only slightly, it is surviving lists of such fines and violations that provide the richest documentation for roads masters’ healthscaping activities in this period. It is also worth highlighting the geographical remit of the Montepulciano official, which, as was common elsewhere, straddled the city and its hinterland.

As the foregone survey illustrates, medieval roads offices may have stemmed from several remits and duties centered on a number of potentially polluting or at-risk sites. Common to all of these places from officialdom’s biopolitical standpoint is their need for protection and upkeep, be it in order to avoid contamination and blockage (which was often associated with the creation of miasmas) or simply for fear of dilapidation, which could cause injury or increase the risk of fire. That is not to argue that we are dealing with a public health board *avant la lettre*. The mandate of Montepulciano’s official, like that of many others, is hardly comprehensive; many areas and activities beyond it could put residents at risk, such as production sites and of course the local market. Nor is he ever instructed to consult medical professionals in order to carry out his job or inquire about mortality rates in and beyond the city. Indeed, the rubric lacks an explicit medical underpinning, but one is not entirely absent from the text as a whole, reminding us that healthscaping was never a set of tasks entrusted to a single person or office but rather a collaborative and hence coordinated effort.
The sojourn of people identified as lepers in the city, for example, is restricted by the same statutes to the local lazaretto (in loco leprosorum) and borderline cases of leprosy are to be decided by medical professionals. Regulations on the use of latrines, moreover, explicitly rely on miasma theory, as the facilities are to be installed in such a way that “stench does not and could not reach any public or neighboring street,” under pain of 100 soldi.

In numerous prescriptive sources emanating from central and northern Italy, similar viarii outfits abound, sometimes in all but name. From around 1351, the general council of Viadana, for instance, was to elect an unspecified number of wise men (sapienti) every March and August, and task them with supervising public infrastructures in the town and its territory. In 1360, two men assumed responsibility for Turin’s “public roads, the Po bridge and other bridges, both across the Po and elsewhere (super viis publicis, ponte Padi et aliis pontibus tam citra Padum quam ultra). Vellano’s 1367 statutes likewise call for the appointment of two vialii to ensure traversability of roads and the smooth flow of water routes. Back in Piedmont, Sovicille appointed six men in 1383 to restore the town’s old road network (indeed, they had to be old enough to recall its layout), branding the entire endeavor as an effort to increase the town’s public good (publica utilità). In Milan, by 1396 at the latest, six officiales stratarum enforced the upkeep of urban infrastructure and hygiene regulations, including prohibitions on littering, creating blockages, transporting uncovered cadavers and hosting sick individuals. Even the inhabitants of the tiny commune of Valle Maira Superiore named three massarii viarum in 1396, charged with surveying the area’s roads and clearing them at least twice a year. To the south, in Castiglione Ubertini, four men were to be elected “as officials
responsible for ruined roads and streets...and wells...as well as all other needs and repairs of the said commune” (pro officialibus super viis et stratis devastatis...et super fontibus...ac etiam super omnibus aliis negotiis et reparationibus dicti comuniis). They were also charged with establishing boundaries between litigating parties wherever necessary and monitoring all weights and measurements. As the 1397 statutes specify, each month the roads masters had to review and examine (revidere et scriptare) the city’s roads, wells and meadows, and cooperate with other officials to ensure the quality of produce (especially wine, bread and meat) sold in town, with powers to punish all pertinent offenders. Between April and September each year, they also were to repair the twelve wells subsequently listed, under pain of five lire.  

In nearby Tuscany, the 1402 statutes of a rural league centered on Ponte a Sieve mention a notary (notarius) responsible for supervising the “streets, roads, bridges and wells found in their settlements and other places through which local men pass, coming from and going to the city of Florence.”  

And a rather similar mandate emerges from the 1408 statutes of Figline, which instruct podestà to appoint officials “to survey and examine” (cerchare et investigare) all of the commune’s streets, roads, bridges, ditches and brooks, and charge the costs to local residents or, where necessary, those involved in causing a deterioration (vicini e di chi l’averà a fare).  

In 1409, Settimo’s legislators promulgated the election of communal viandoli, later specifying that they had to focus their attention every August on the principal road and ensure that residents cleaned the gutters near their homes. Montevettolini's statutes of 1410 likewise mention two viarii among the regular officials, with a duty to monitor and examine the commune’s roads, within and outside the walls
(provedere e cercare le vie del comune, dentro e fuori). At least twice every administrative semester they must repair them, under fine of twenty soldi each, and they are to receive any help they require from the podestà. Anyone failing to obey these instructions would be liable to a five-soldo fine.\textsuperscript{110}

The proliferation of statutes spotlights communes’ ongoing concern with streets and roads as sites that define public nuisances and organize public and private responsibilities. Ivrea’s 1329 statutes, for instance, call for the appointment of two neighborhood supervisors (sorestani) for each paved road, albeit without discharging local residents from cleaning before their own homes.\textsuperscript{111} These men, moreover, had six extramural counterparts, two from each of the city’s thirds, responsible for maintaining the roads and bridges leading into their neighborhoods.\textsuperscript{112} Valgrana’s 1431 statutes describe two types of massarii viarum, a team of three men concerned with roads and a group of four men responsible for maintaining bridges and the bays of watermills.\textsuperscript{113} From at least 1436, the four roads masters of Fiastre were to ensure the pristine state of all roads and streets, both in and outside the town’s walls.\textsuperscript{114} Badia Tedalda’s fifteenth-century code likewise formalized the election of the commune’s viarîi, who were instructed “diligently to observe and examine each and every road, street, alley and neighborhood belonging to the commune, as well as fountains, wells and castle fortifications.”\textsuperscript{115} The rubric is adopted verbatim in the 1492 statutes of nearby Pratieghi, a tiny hilltop settlement.\textsuperscript{116} In mid fifteenth-century Ferentino legislators decreed (and probably not for the first time) the election of four viarîi, one from each of the city’s gates to supervise all “roads, possessions and other sites belonging to the commune” (vías, possessiones et alia loca communis) and repair all damages to canals, gutters and sewers that may cause
neighbors and passersby to experience a “nuisance, injury or foul smell” 
(molestiam, iniuriam vel fetorem). And Saluzzo’s 1480 code orders the election 
of a massarius (representative) for each of the commune’s roads, charged with 
helping the podestà prevent misappropriation or blockage that could cause 
“injury or violence to anyone” (quod nemini fiat injuria vel violencia).

Elsewhere the relevant rubrics can be less specific, even opaque, perhaps 
reflecting a developed understanding of what the office entails, perhaps leaving 
room to respond to changing political and administrative circumstances. Tivoli’s 
1305 legal code, for example, goes no further than listing “magistri viarum” 
among the town’s officials. Of Ripi’s viarii we only know they could charge 
residents with illegally occupying or obstructing a public way in 1331. Later 
that century, a roads, streets and fountains office was established in Orte, in a 
statute omitting any further specification of his tasks. Rivoli elected “custodes 
viarum” in 1457, while the town’s consuls and sindici were held generally 
responsible for roads’ upkeep “pro utilitate communis.” And Deruta’s 1465 
statutes merely mention an undisclosed number of viarii who were to supervise 
every major road and fine violators up to five soldi.

Given the very dynamic political and administrative context in which 
roads offices were created, it should come as no surprise that those who were to 
fill them had no exclusive jurisdiction over traversability and cleanliness. In 
Pistoia, for example, beyond the aforementioned stone removers, the 1296 
statutes also name judges responsible for evaluating damages (iudices de dannis 
datis) and charged with a group of tasks that should by now ring familiar, namely 
enforcing the proper construction of latrines, the removal of dung, monitoring 
certain artisanal activities and ensuring that pigs do not roam the city freely.
also calls for the election of two men from each of the city’s gates, who must “go along with one of the podestà’s notaries...to survey the public streets and roads outside the city and throughout Pistoia’s [rural] district.” Montopoli’s minor council was to elect four men as “supervisors of the commune’s roads, drains and ditches,” who must supervise the roads, drains, ditches and pits in the commune’s plains and hills, and ensure they are all maintained, rebuilt, drained and relieved, cleared, unobstructed and unoccupied...and drain ditches anew and have them made.

Yet the same text also states that the so-called damages notary (notaio de’ danni dati; Latin: notarius dannorum datorum) is responsible for the traversability of the “commune’s bridges, roads...and courses.”

The two Montopoli offices just mentioned may have originally or even just theoretically stood across an active/passive divide: while the former dealt with the maintenance of gradually deteriorating sites, the latter’s focus was on malicious destruction or willing neglect. In several towns across Piedmont another division of labor seems to have been common, according to which viarii (and more often, camparii) were responsible for registering violations while the damages notary acted as an assessor, defining the costs of necessary repairs and individual compensations. In other towns, however, similar divisions are more difficult to detect. Rieti’s damages notary, for instance, was to supervise, clean, and repair the city’s roads, bridges, fountains and waters, while the roads notary was also held responsible for monitoring its streets, bridges and “above all the
river's path” (*et maxime viam torrentis*). Given the clear overlap, the statutes may be intentionally silent about the specific division of labor, perhaps reflecting an ongoing cooperation between the two (and already centralized) offices. As later chapters will show, surviving documents of practice support this hypothesis.

Further law codes throughout the fourteenth and fifteenth centuries attest similar dynamics and ambiguities. The damages and roads notaries worked closely in Amelia as well, as evidenced by one of the most elaborate public hygiene plans to have reached us. The 1432 law code of Piancastagnaio suggests a near-fusion between the two offices with its choice to regulate the election and office of *viarii* and damage assessors in a single rubric. As the text states, the two must collectively “observe and regard each and every road, well and bridge in the castle of Piano and the settlements and district of Piano…and report or denounce any need...to the podestà.” Both officers were also given the task to resolve disputes over physical boundaries (and presumably their upkeep, wherever necessary) between neighbors, report those who trespass onto a public road to the podestà, and clear sewers (*chiocane*) and drains (*grondaie*) every two months. Notably, the rubric ends with a general admonition linking these officials’ duties with the entire community’s safety and wellbeing: "And if they see that any of these [sites] emits any filth (*bructura*)...which may be harmful (*nociva*) to the community or individual persons, they must report it immediately.”

In contemporary Massa and Cozzile, the three *viarii*, elected for a period of six months, likewise had to work closely with the *notarius dampnorum datorum* in supervising the town’s infrastructure and fine offenders. Subsequent
rubrics accordingly instruct residents to report very similar offenses, such as illicit waste disposal, blocking gutters and streets, and washing linens and skins near the town’s well or its trough, to these officials interchangeably. Close cooperation between roads officials and damage assessors could and at times did lead to their formal amalgamation. Ascoli Piceno’s 1377 statutes discuss the “officio de lu dampno et de lu viale,” and from 1380 at the latest Monteriggioni appointed two viarii estimatori di danni, a formulation that suggests a local adaptation or a collapsing of two existing offices into one.

On the other hand, separate remits could survive when it came to certain types of infrastructure. Spoleto’s 1296 statutes, for example, required that the viarius be a foreigner, and ordered his wages to be paid by those living along the roads he serviced. He could fine violators and their relatives up to ten lire for obstructing traffic in any way, and had substantial resources for the upkeep, cleaning and surveillance of roads. He is not mentioned however in the context of maintaining wells or the city’s great aqueduct, whose cleanliness and viabilità are dealt with elsewhere in the same text.
Aqueducts across medieval Italy were often based on infrastructures originally built by Romans, as in this case, but entirely revamped to meet the new and growing needs of urban populations. Fifty years later the distinction between land- and waterways officials in Spoleto remained intact: the viarius’ mandate did expand (or was made more explicit), covering all public roads, squares, bridges, wells and drains “wherever they may need repair” (*vias, plateas, pontes, fontes et clavatos ubicumque fuerit opportunum faciat reparari*), while a separate official was to maintain the aqueducts and fountains. Once the town came under direct papal rule the two responsibilities do eventually merge, as a revision from 1364 attests. But the process was hardly ubiquitous. From at least the late fourteenth to the sixteenth
century, political geography rather than infrastructural types defined jurisdictions in Orte, as two vialii were held responsible for streets and waterways inside the city walls while six magistri stratarum were elected to maintain the streets, wells, aqueducts and bridges beyond them.¹⁴⁰

Despite the general trend towards all-encompassing roads offices, then, separate jurisdictions persisted throughout the fourteenth and fifteenth centuries. Ravenna’s 1327 code designated one official for paving roads and another as a water custodian.¹⁴¹ In Castelfranco di Sopra, the same set of statutes from 1394 mentions viarii, with full authority over roads and those who use them most, and officials entrusted with building bridges and digging wells (uficiali a fare ponti e fonti).¹⁴² Similar distinctions seem to have been in place in Empoli, where the 1416 statutes designate separate “operai del popolo” and “vialij.” While the former’s remit covered walls, gates, bridges, drains and ditches, the latter had to ensure the cleanliness of “any and all public streets and roads, estuaries, rivers and canals” (tucte e ciaschedune strade et vie publiche, fossati, rivi et canali).¹⁴³

Whatever the scope of a viarius’ mandate, statutes routinely sought to regulate his relations with the city’s administrative constituents, suggesting this continued to be a source of some tension. In 1347 Spoleto, for example, the roads official was required to place one man in each parish, who is to monitor and repair the roads and could denounce violators and receive half the pertinent fine.¹⁴⁴ As discussed in the previous section, it is unclear from which direction such stipulations were being promoted. Was it satisfying the regime’s need for legitimate and more efficient control, or rather allowing parishes to self-govern without explicitly rejecting a structure they may have perceived as an
imposition? Flexibility was likely a key issue, here as elsewhere, since the statutes specify neither the provenance of the *viarius* nor that of his deputies’; nor do they identify to whom they were directly accountable. Later revisions of the statutes likewise stay silent on the matter.

Another way to alleviate such tensions between administrative center and periphery (or locality) was to experiment with *viarii*’s identity, or at least adjust it according to political and economic circumstances. Hence some statutes’ demand that roads officials belong to the podestà’s regular (and thus foreign) entourage, and others’ call for the appointment of local residents, hired for a period of six or twelve months. They could be paid a regular salary and be allowed to earn nothing more from their work, or they could augment a basic wage by servicing various locations. As we have seen, moreover, some regimes appointed one official while others decided to select several *viarii*, for instance from each of the city’s main constituents, as was common with other medium-level offices at the time. *Viarii* could simply be appointed or else elected, with different regimes during and after the communal era placing different limitations on their terms and dis/qualifying candidates on the basis of family connections, provenance, age or property.

Whatever the office’s specific constellation and the officers’ terms of employment were, and before delving into their practices in the next three chapters, it is clear that *viarii* and their parallels were ubiquitous and that their mandate involved healthscaping. Underscoring the potential impact of their work on population-level health and its preventative nature does not involve a form of administrative retrodiagnosis; it was intended by those who appointed them and unequivocal to those whose behavior they sought to monitor. The
areas and facilities falling within most viarii’s remit were designated in numerous statutes as at-risk sites, places whose poor upkeep and supervision would likely result in air or water pollution or threaten the safety and wellbeing of local residents and visitors. Whether the main challenge they faced was inclement weather, neglect, apathy or outright vandalism, material and human factors converged to place this office at the forefront of conscious and coordinated municipal programs to promote health and fight disease.

Conclusion

Just as viarii’s jurisdiction over traversability was seldom complete, so their preventative health-related activities rarely exhausted local regimes’, organizations’ and individuals’ efforts at healthscaping. While the focus in this chapter (and the book as a whole) is predominantly on these overlooked officials, it is certainly worth recalling that other urban residents (including local midwives, physicians, barber-surgeons and pharmacists), the church, lay confraternities, guilds and private citizens were expected, even by the extant normative sources, to play an active role in promoting population health and safety. They achieved this by following different paths, with differing degrees of enthusiasm and equipped with diverse resources. For instance, as scholars have long noted, communal regimes and later despots, including popes, hired municipal physicians, consulted astronomers about impending plagues, and established hospitals, leprosaria and almshouses for the needy poor, all as part of keeping their cities’ healthy, ordered and beautiful.145 Well outside the context of plague epidemics, urban magistrates appointed ad hoc or permanent officers to fight disease, like those responsible for keeping Florence leper-free.146 And to
offer another well-documented approach, vigils, fasts and penitential actions promoted by religious authorities aimed at cleansing individuals and the community from sin, encouraging a pious life and thus reducing future suffering, including in the form of disease.\textsuperscript{147} As Peregrine Horden observed for the early Middle Ages, “[a] temple is as practical as a dam—and a miracle is as practical as a health board.”\textsuperscript{148} Last but not least, medical advice books (\textit{regimina sanitatis}) began their successful dissemination in this period among urban elites, first in Latin and soonafter in diverse vernaculars. While surely accelerated by the onset of plague, this literature’s proliferation harkens back to the thirteenth century, as Marilyn Nicou in particular has shown.\textsuperscript{149} And although their authors mostly addressed elite readers and their close families, their insights not only influenced personal prophylactics in terms of diet and hygiene, but also, as Sandra Cavallo and Tessa Storey demonstrate for a subsequent period, shaped the material environment of urban households, whose social fabric was rather heterogeneous.\textsuperscript{150}

Collectively, the statutes examined in this chapter offer strong proof for the existence of preventative approaches to population-level healthcare and a range of administrative strategies to pursue it, far predating the onset of Black Death in 1347 and lasting throughout the plague’s ruinous cycle of visitations. It is fair to ask whether this kind of attention to the urban environment, however consistent and coordinated, meant anything in practice. René Sand, who certainly acknowledged the antiquity of public health, also opined that legislation regarding preventative measures in the Middle Ages “was seldom more than a dead letter.”\textsuperscript{151} But was healthscaping a legislative fiction in Italy too, a policy with no traction, or a social reality? Echoing Sand and similar
evaluations, some historians of medieval health have flatly denied that urban sanitation statutes, however well-intentioned and scientifically grounded, had any real consequence for the healthy running of cities. Maria Serena Mazzi, for instance, concluded that:

[Medieval] legal provisions deal with public hygiene with a fastidiousness, a minuteness and a repetitiveness that immediately conjure up an unheeded message. Furthermore, the iteration of these norms lead us immediately to believe that they did not seek to prevent but rather to offer a remedy against deplorable customs already deeply engrained in everyday life....

Prophylactic measures, the fundaments of medicine, the attempts to establish an efficient sanitary organization, were partial measures that did not lead in a general sense to an improvement in the living conditions of the masses.

Mazzi is by no means alone in drawing such firm conclusions about medieval Italy on the sole basis of prescriptive sources, much like earlier scholars did by relying on the era’s fiction. Giorgio Baroni and Giorgio Berti’s classic survey of peninsular sanitation services likewise claims regarding evidence from medieval statute collections that they do not attest “a real, regular cleaning service of public grounds: we have only regulations, with which the authorities hoped to render the civic panorama a little less dirty (and it is unclear whether they succeeded; indeed, everything seems to suggest the contrary).” And while
more elaborate, the methodology (and conclusion) remains largely the same in the only English-language regional study on the topic, Zupko and Laures’ *Straws in the Wind*. As its title announces, the book argues that environmental laws could tell us the implicitly modern *direction* urban governments wished to take, but not their actual path on the ground.\(^{156}\) However, without examining the numerous available sources that could support or refute this thesis—and these exist in spades—the conclusion seems premature. It is therefore time to move from the realm of law and policy to that of social and administrative practice.
Chapter Two

Lucca's *Viarii*

Introduction

Lucca's stately ramparts, dating to the mid seventeenth century, enclose a much earlier urban fabric. The cozy ensemble of churches, piazzas, towers, streets and even the revived outlines of a Roman amphitheater harken back to the power and prominence the city gained by the thirteenth century, in an already crowded Tuscan field.¹ The same era also features prominently in the city’s civic and ecclesiastical archives, benefiting numerous scholars over the last centuries. None of this material and textual wealth, however, has informed the city’s public health history. For, insofar as they have remarked at all upon Lucca's salubriousness in the later Middle Ages,² historians have mostly drawn upon normative sources, laying aside the recorded activities of the local roads and works official, the *Maggior officiale delle vie e de’ pubblici*.³ The men in charge of this body were mainly concerned with maintaining urban, suburban and regional infrastructure. Yet, here as elsewhere, they were tasked with enforcing what were seen as interrelated policies on sanitary, labor, retail and building regulations, hearing complaints from residents about health hazards, gathering evidence on-site and fining pertinent offenders. The latter included men and women occupying public ways illicitly for artisanal or commercial purposes, landlords directing their gutters into public spaces or blocking sewage canals with domestic waste, and parishes and rural communes failing to maintain public facilities under their jurisdiction, such as wells, bridges, gates, canals and
of course roads. Fighting such phenomana, as the statutes stressed, was to be done “pro bono et sanitate hominum,” for the benefit and health of all Lucchesi.

Lucca’s *viarii* then promoted a rather similar biopolitical agenda to that of their numerous parallels across the peninsula, as surveyed in the previous chapter, and the officials’ records resemble in their scale and scope those explored in the next two chapters, regarding Bologna and Pinerolo. The comparison begins to falter on both counts, however, from the later fourteenth century onwards, when the Lucchese office gradually, if not decisively, came to be subsumed by the pre-existing office of the *fondaco*, whose records are far more abundant. Thus, for the earlier period, thirteen (only partly legible) volumes have come down to us, covering the period 1336-1377, while subsequent centuries (until 1801) are covered by nearly 5,000 registers attesting the far broader remit of the *fondaco*. At any rate, neither the court protocols and fiscal registers comprising the bulk of the earlier series, nor the more abundant records of the *Curia del fondaco* have ever been mined for studying medieval preventative practices. Yet given the far larger jurisdiction of the latter office, information directly related to preventative public health and safety measures is much more sporadic in its registers, which has led me to focus in the present chapter on the *viarii*’s more directly relevant sources.

As in later chapters, here too we will begin by describing and analyzing the officers’ mandate and move to observing and explicating their activities and attendant challenges. It is the latter in particular that foregrounds the power dynamics the office’s enforcement activities involved, and although the present chapter provides only a limited study of these dynamics, it does offer a fresh
view of local health literacies and how these were deployed by several stakeholders in negotiating the boundaries between public and private spheres.

Lucca's *Officiale viarum*: Norms

Betraying archivists’ and earlier historians’ preference for normative over descriptive sources, the brief inventory of the *Curia viarum’s* series begins sequentially, but not chronologically, with a register dating to the mid-fourteenth century. It contains regulations that set out the office’s mission and define its officials’ proper conduct. Likely drawing on the 1342 redaction of Lucca’s statutes, which describe the office, it is the only part of this or any other register in the series that has found its way into print. Yet already at the normative level it is possible to trace the office’s early history, as the existence in the same series of several volumes predating 1342 strongly suggests. And indeed, out-of-print editions of revisions to earlier statute collections do treat the office and thus illuminate its emergence more accurately. Moreover, editions of statutes postdating 1342 (also out of print) and city council minutes extend the office’s history into and beyond the onset of Black Death and lead us through its integration with the *fondaco*. Collectively these records form the backdrop to examining the officers’ activities as they emerge from their documents of practice, to be dealt with in the subsequent section.
In their current state, Lucca’s earliest surviving statutes, dating to 1224, 1232 and 1261, are fragmentary and contain no direct reference to jurisdictions over health or safety. And while there is likewise no mention of viarii or their parallels in the 1308 statutes (the first full text to have come down to us), the texts do address environmental hazards as defined by a Galenic framework. Book III, c. 102, for instance, forbids the slaughtering or discarding of any carcass or other fetid matter within the city walls or at a distance of 1000 bracchie from them, under pain of 100 soldi. And Book III, c. 141, states that anyone placing or working skins in any public street would be subject to a 10-lire fine “in order to
eliminate stench from the roads and streets of the city of Lucca” (*Ut putredo cesset de viis et stratis lucane Civitatis*). As the previous chapter of this book argued at length, numerous laws aiming at reducing stench directly evoked or at least implicitly relied upon miasma theory, thereby indicating a regime’s biopolitical prerogative at least vis-à-vis the butchers’ and leather workers’ guilds, if not the church and the population at large.

In similar vein, the revised statutes of 1321 contain a number of laws ostensibly designed to protect residents’ health, mostly concentrated in Book V. Stressing the regime’s concerns for the city’s wellbeing, a prohibition on selling cuts of meat from diseased animals is explicitly meant for the benefit and health (*pro bono et salute*) of the entire commune of Lucca, and designed “to avoid any doubt or danger that might arise” from such practices. The elders are to elect four men and provide them with salaries in order to resolve pertinent disputes by declaring the animals to be free of illness and danger. Other statutes establish safety standards for operating ovens, prohibit actions that block or otherwise impinge upon the city’s drainage systems and roads, and describe the proper maintenance of specific infrastructures such as the trough near the San Pietro gate. Resembling preventative-health measures common elsewhere, another rubric forbids the open flow of animal blood and water mixed with blood through the city, under pain of 10 lire.

Preceding these promulgations and directly related to them is the first mention of Lucca’ *viarii*. Given a clear mandate to keep the city clean, these men were to punish anyone blocking streets or clogging waterways by throwing feces, waste or any other “putrid, fetid or dishonest matter, or blood or water mixed with blood,” under pain of a fine of 5 lire. They are to impose a 20-soldo
fine upon anyone washing clothes near or watering animals directly from the city's wells, with half the sum going to the accuser. And to remove any doubt on the matter, fines are imposed on and repaid by “father on behalf of son, teacher for student...and husband for wife, brother for brother...lord or lady for servant or maid.”

The statutes grant the roads master full authority (*omnem bayliam*) to investigate and punish violators, and they connect his key task, namely ensuring flow, directly with the preservation of “the wellbeing and health of the people and the city of Lucca” (*pro bono statu et sanitate hominum et personarum Lucani et civitatis*).

As in numerous peninsular statutes issued in this period, the 1321 redaction too alludes to ocular intromission in instructing the roads master about ensuring that the city's drainage system is covered: “All sewers in the city where putrid water or any other putrid and disturbing matter” flow are to be enclosed and concealed at least to the height of four *bracchie*, so that “people could not see the aforesaid matter.” Wells and sewers are likewise to be covered throughout the city so that people to whom these do not belong could not throw any filth (*res putridas*) into them, or else risk the high a fine of 40 lire. It is in this preventative context that Lucca's legislators also announced a major intervention in domiciles, extending their disciplinary claims into the private sphere:

Item, let everyone be more vigilant regarding domestic matters, whence putridity is accustomed to pour forth, but which may or indeed should be enclosed by a wall. And let all latrines situated outside domiciles be suppressed and set within their respective homes and plots at the
expense of their owners and be buried underground, enclosed and clearly
signalled, so that they could not drain into a gutter or a public way.20

Viarii were to spearhead this incursion into private homes in the name of public
health and safety, aided by local residents who were to their eyes and noses on
the street and—no less important—domestic perimeter walls. The office’s
documents of practice, to be explored below, help trace the extent to which they
pursued this policy and the tensions thereby heightened or even created. Yet
already at the normative level it is evident that Lucca’s political elites were
interested in stretching the boundaries of a public sphere and training a
disciplining gaze supported and legitimized by a medical discourse.

The rubric is unequivocal in defining officialdom’s perspective. It
describes and proposes a solution to a public health hazard ostensibly created by
myopic private residents or negligent artisanal guilds. In their quest positively to
impact the population as a whole, the city’s elders devised a program (or
strategy), rendering any incompliance with or attempt to subvert it as an anti-
program (or tactic), adversely impacting the common good. Historically,
however, it is just as likely that the many latrines and drains installed by
individual households predate communal amenities, and that nascent public
infrastructures such as sewers impinged upon the latter rather than corrected
disharmonious hygienic practices. Domestic and neighborhood uses, moreover,
could be just as medically informed and preventatively designed, serving as they
did a diverse group of people, animals and artisanal production sites. If so, what
the statutes present as a benign intervention may in fact be an anti-program, a
tactic or simply a gambit in an ongoing biopolitical negotiation.
By and large the later statute redactions of 1331 (preserved today in the Lucchese State Archives) and 1342 (which are also in print) contain a recapitulation of the rubrics discussed above. There is some tinkering with the fines that roads officials could impose, mostly by way of cutting them, often by half or more. The change can be explained in different and not necessarily unified ways—economically, behaviorally and politically. Moreover, it is unclear from the decline of the sums to be extracted whether they reflect general compliance, a realization that they were too high to impose or a perception that they were incommensurate with comparable civic offenses. Additions to the statutes, debated and introduced in 1350, 1353, 1360, 1370, 1372 and 1377, likewise have no direct bearing on the roads officials’ duties, a striking fact given that we are dealing with a period in which the city was repeatedly and severely hit by plague. It would however be hasty to conclude that their absence from later debates underscores magistrates’ apathy in the face of disaster, just like a proliferation of reiterated statutes does not necessarily prove they are being ignored.

Whatever else it may suggest, the relative stability of the office’s preventative remit and norms of conduct in this period (and prior to its merger with the fondaco) allow us to make a few tentative observations about its goals and methods. The first concerns the rationale underlying the fines to be imposed. It seems that Lucca’s magistrates established the pertinent fines to stress residents’ personal, mutual and at times collective responsibility for ensuring the city’s cleanliness, thereby underscoring a link between urban hygiene and civic order. Fostering or indeed imposing mutuality required closing numerous loopholes through which residents could slip in order avoid fines and turn a
blind eye to existing or potential hazards. To recall, virtually no one could escape a penalty if found guilty. Poverty, age or lowly legal status only meant that the fine climbed up the socio-economic ladder, from wife to husband, from son to father, from pupil to teacher (perish the thought!). Horizontal responsibility was likewise inscribed by fining bystanders who failed to report a violation that they witnessed or call out officials for neglecting to act upon denunciations. Yet magistrates provided carrots as well as sticks to improve detection, as individuals reporting certain offences were eligible for receiving up to half the value of the imposed fine. The statutes also empowered denouncers and allowed them to confront anyone regardless of status.

Secondly, the prescribed fines help trace the contours of a socioeconomic map attendant upon environmental offences. As appendix 1 demonstrates, in nearly one third (8 out of 25) of the generic cases listed in the 1342 statutes, relatively modest sums, of up to 5 lire, are set for illicit domestic and small-scale industrial waste disposal, blocking drains, allowing and selling livestock within the city walls or defiling troughs. These were likely to be offenses perpetrated, at least in a direct sense, by a social underclass: domestic servants, apprentices and day-laborers. Fines of up to 10 lire were to be imposed in nearly half of all cases the statutes deal with (12 out of 25), and said to involve significant industrial pollution, illicit occupation of streets and waterways and neglecting the upkeep of public infrastructure passing through one’s land. These are offenses that can easily be linked with the possession of property or access to some executive or guild power. It is mostly beyond these two major groups of violations and fines that socioeconomic distinctions cease to matter. Only substantial damage to public walls, roads or waterways, or else highly visible (and thus, in medieval
thinking, more dangerous) acts of pollution, such as failing to enclose a latrine or bury a sewer, were to be punished by fines higher than 10 lire and up to 100 lire. There is, in short, a well articulated hierarchy of polluting and damaging violations reflected by the corresponding fines.

Thirdly, the statutes provided guidelines for the *viarii*’s comportment, prescribing fines of between 10 and 200 lire for dereliction of duty. They display a certain correlation between the potential damage of polluting actions and rank *viarii*’s priorities correspondingly, although the fines simultaneously reinforce the socioeconomic scale discussed above. For instance, officials are to be fined 100 lire for failing to pursue any case involving the occupation of or damage to a public road. Likely reflecting a prevalent notion that miasmas emanating from liquid waste are a major source of pollution, the statutes prescribe moderate to high fines against officials who overlook cases of water contamination (25 lire) and allow animal blood to flow into a public place (200 lire). What this may convey, apart from how strongly miasma theory shaped Lucca’s public health strategies, is an emphasis on routine vigilance regarding minor offenses, rather than targeting major but rare violations. It was perhaps a concern among Lucca’s civic leaders that subordinate officials would pursue the latter (and, from a financial perspective, more lucrative) cases at the expense of the greater public good. Or, at the very least, legislators found it useful to express it in such terms.

Last, the mere existence of roads masters from 1321 at the very latest challenges a view that sees the Black Death as a singular watershed moment in the history of public health, prior to which urban governments were reluctant to tackle issues of communal hygiene and safety. Confirming observations made by a recent generation of historians regarding the expansion of socialized
medicine much prior to the second plague pandemic, these records attest that here too there was institutional recognition and at least a modest mobilization of resources for improving urban health conditions, and in a manner that was not limited to socioeconomic elites.\textsuperscript{24} That is not to deny that responses to Black Death influenced public hygiene practices, at times even radically, but rather to stress that their point of departure was neither a state of complete ignorance nor a total lack of government will and capacity to enforce population-level healthcare, including preventative policies, as many public health historians tend to assume (see introduction).

Before moving to examine the roads officials’ records of practice, it is worthwhile noting that protecting the city’s population was a regular topic of debate among council members. New regulations or revisions made to existing ones could be the fruits of thoughtful negotiations, but they could also reflect ad hoc responses to emerging situations that were not necessarily plague-related. On 26 February 1389, for instance, twelve men alerted the Great Council to the slaughtering of animals being performed at the city’s great inn (\textit{taverna maggiore}) and to the innkeepers’ habit of allowing the butchers involved to store the poured-out blood under their rooms, sometimes for months on end. The result, according to the petitioners, who were recorded in the vernacular, is that the emerging stench was harming each and every neighbor (\textit{ogni vicino}) and indeed the entire population of Lucca by corrupting the city’s air (\textit{noia a tutta la citadinanza di luca impero che corrompe laire dela cita}). In addition, they averred that the stench caused by area’s candle makers is so devastating that anyone working there has to vacate it daily, in order to avoid “infirmities of the body, [a situation] which is not helpful but rather brings damage and shame” to the city.\textsuperscript{25}
The council ordered the formation of a representative committee to investigate and report back, but their findings, unlike in the Roman case this book began with, have not come down to us.

Another instance dates to 20 May 1390, when the council introduced a reform concerning the recent construction and operation of industrial furnaces. Here too magistrates were responding to a specific complaint, namely that the facilities’ stench and fumes posed a serious threat to communal health. Due to the furnaces’ location near and along the city walls:

the air, which used to be subtle, healthy and pure, has deteriorated and is daily becoming heavier, thicker and as it is were burdened, from which [situation] the citizens and all the residents of the city of Lucca are afflicted by various sicknesses and diseases.

And yet the furnaces continue to operate, “increasing the pollution of the air, not without danger to the citizens and [causing] public damage.” In response, the councilmen ordered that three men from each of the city’s thirds are to be elected and put to work, “in order to avoid corruption and the thickening of the air, which arises from the stagnant waters of swamps and muck...[and] whence the city falls into ill-health.” By this period the office of the roads masters had probably ceased to exist, but its replacement, the fondaco, was put in charge of fining those who violated the relevant laws, revised according to the committee’s recommendations. The fondaco official was to receive one quarter of the fine imposed, but if the prosecution ensued from a private accusation, the accuser would be eligible to half the fine.
The Roads Masters at Work

The thirteen volumes surviving from the Curia viarum series, alongside occasional references to the office in the council’s protocols and the city’s criminal court records, collectively help bridge between the realms of law and policy on the one hand and that of social practice on the other. They allow us to observe the roads masters in action and especially in interaction with their natural, built, social, legal and institutional surroundings. Each register contains the proceedings of the officials’ court and other activities undertaken on their behalf, such as construction work, fine collection and public communication of new and existing bylaws. While the lion’s share of the outfit’s budget went towards the upkeep of physical infrastructures, and hence involved a constant hiring of laborers and purchase of provisions, most of its extant records attest enforcement activities meant to deter or punish environmental offenders. The records thus expose both the tenuous equilibrium viarii wished to maintain and the danger of disequilibrium they sought to stress.

As was typical of that time and place, any case the officials discussed either began as a private accusation (accusatio) or was the culmination of an inquest (inquisitio) led by the officials in pursuit of allegations raised privately and at times even secretly. In March or April 1337, for instance, a certain Cienuccho Neri was fined 2 lire for obstructing a public road with his merchandise; on 24 April that same year Ceccore Ciardelli received the same fine for allowing his drain to spill onto a public way; and on 1 April 1343 Fiorina, widow of Lapo di Artimono, was charged with (and later absolved of) excessively contaminating a private cesspit. All of these processes were
prompted by clandestine denunciations ("ex denuntia et accusa cuisdem secreti denuntiatoris"; "ad denuntiam secretam").

The path to prosecuting environmental offenders, however, was bumpier than the court’s registers appear to suggest. In 1335 Lucca’s elders obligated the viarius to seek approval from the city's deputy vicar before launching any inquest, including visiting an at-risk site such as a workshop or mill. Even private accusers could only approach the court after having received the deputy vicar’s consent. The procedure may have been designed to help curb corruption and vindictiveness, yet it simultaneously enabled the instrumentalization of the office for political purposes such as protecting specific industries or individuals. Conversely, the viarius could be employed to target certain physical or artisanal sectors. On 17 October 1342, for example, the elders lamented the extended neglect of health and safety regulations by bakers and leather workers. The former's ovens, they claimed, were seldom covered properly, while the latter rarely met their obligation to prevent filthy water from spilling into adjacent streets—both measures designed “for the obvious benefit of the commune of Lucca” (pro evidenti utilitati lucani communis).

Such violations, which are common in the records, underscore the usefulness of this series for a historical anthropology and sociology of urban public health, and ipse facto that communal prophylactics were taken seriously. Along with the sources explored in later chapters, these records illuminate the contestation of boundaries between public and private health spaces and the promotion of and resistance to biopolitical agendas by individuals, guilds, the church and the secular government. Moreover, given how central the concepts of dirt and pollution have become to our understanding of past and present
cultures, these registers help reconstruct how fourteenth-century Lucchesi understood filth from both a social and a political perspective, thereby informing discussions of how premodern societies demarcated normalcy and deviancy in the realm of hygiene.
Lucca’s roads official and his notary recorded assignments they were given, reported expenses on building materials and labor, and listed violations and fines as well as complaints and witness testimonies. The above image, however, is of ordinances that the town crier announced on behalf of the office.

Source: Archivio di Stato di Lucca, Curia delle vie e de’ pubblici 8, fol. 39r (July-November 1347)

Image by Francesco Poggi

By kind permission of the Ministero dei beni e delle attività culturali e del turismo—Archivio di Stato di Lucca.

The roads masters’ tribunal participated in shaping the city’s power relations and the conceptual boundaries between private and public space in other ways as well. For instance, again in 1337, four rural communes were fined for their derelict bridges, and two other settlements for neglecting a road under their responsibility. Both violations were construed by officialdom as undermining actions designed as prophylactics measures for human health and commercial resilience, but they also insinuated the desired relations of power between the city and its subject communes. In a case illustrating another form of power brokering, on 28 July 1335, Reynerio de Malizardi, rector of the church and hospital of San Leonardo in Treponzo, protested against his prosecution by the roads master for refusing to rebuild a dilapidated bridge, arguing that the structure did not belong to the hospital, and was damaged by the adjacent commune. At any rate, he said, he could not be fined for it, having a clerical exemption. Last, in early June 1354, Datuccio Pieri, a steam-bath worker (stufaiolo), was denounced for allowing filthy water to drain from his boilers and pour onto a public way. The prosecution at least implied that the government
deemed guilds insufficiently effective in monitoring their members.\textsuperscript{40}

Magistrates’ broad gaze thus encompassed laypeople and clergymen, rural
communes and urban guilds and manufacturers, and legitimized their
disciplinary actions by employing a health and safety discourse.\textsuperscript{41}

Alongside biopolitical dynamics, the tribunal’s records also illuminate
contemporary views on health risks and the transmission of disease. While the
idea of miasmic contagion was central to premodern medicine and public health,
both the \textit{viarii} and those who approached their court were apparently driven by
another peculiarly medieval fear as well, namely that of sight and scent pollution.
It was grounded in a theory of optics, long familiar to medical and health
historians of Antiquity and the Middle Ages, according to which the imprint of a
perceived object can impress its positive or negative qualities upon the
observer’s mind.\textsuperscript{42} Thus, when on 25 January 1343 the officials charged
Nucello Arrigi of Pertigliano with neglecting to maintain his latrine (\textit{necessarium}), they
complained about the debilitating sensual experience of passersby, who “could
observe the rotting and stinking blemishes of the said latrine.”\textsuperscript{43} Likewise, in late
May that year, Danino Chichi was secretly accused of neglecting the upkeep of his
latrine, which inflicted those using a nearby public road and others visiting the
adjacent church with repugnant sights and smells.\textsuperscript{44} And those complaining
about Datuccio, the aforementioned \textit{stufaiolo}, blamed him for causing a stench
“that reached the neighbours,” and creating a potentially dangerous
contamination.

Like the officials’ statutes, so their tribunal records offer a fresh
perspective on the role of health and safety in shaping contemporary notions of
private and public space. In late April 1352, for instance, Luporino Bertucci and
Colucimo Ventura of San Bartolomeo in Gello were secretly charged with sabotaging a road “through which men and animals...were accustomed to come and go,” posing at best an inconvenience and at worst a major safety risk. On their part, the defendants explained that these were works being carried out on a trail passing through private land (“non ut via publica set ut semitula existente in terris et super terras dictorum Betti et Gueri vel alicuis eorum”). As the case continued, the accusers presented local residents’ habits regarding the trail as a paramount consideration. In other words, the defendants were charged with encroaching upon and damaging a de facto public utility. Tweaking the private/public divide by recourse to health and safety discourses was thus a useful way for Lucca’s government, as it was for Rome’s, to insert itself into areas of civic society that formerly belonged to the domain of private households, neighbors or business associates.

It is small wonder, therefore that stressing the public nature and location of violations seems to have been an effective way to secure the officials’ attention, if not a prerequisite for a successful suit. In late April 1339, for example, a group of residents complained about a gutter spilling sewage into their street from the home of a certain Benvenuto. In their petition, which also reflects fear of sight and scent pollution, the plaintiffs asked the court to order Benvenuto to seal the said gutter, refrain from placing garbage—the alleged cause of the obstruction and spillage—in it, or allow water to run through it (“quod dicta canalia claudat et plus aquam vel altram putritudinem non proiecat per ipsam canalia”). In his response, the accused rejected the charges out of hand, claiming first, that the gutter presents no obstacle; and secondly, that it had already been there for over thirty years. Yet, as the case dragged on,
it became increasingly evident that custom had been the wrong card to play.

From the court’s flexible perspective, and in contrast to the one adopted in the previous case, maintaining a *status quo ante* was not or at least no longer crucial. Such cases illustrate how governments and individuals sought to address the multiple health risks they faced, and that this endeavor required adaptation, sometimes at the expense of conservation. Furthermore, although the extant register is silent about the outcome of this case, the proceedings suggest that the plaintiffs intuited how inviting the *viarii* to intervene in this dispute was likely to curry favor, since they were providing the court with an opportunity to promote the regime’s biopolitical agenda and obligingly underscored a link between public cleanliness and political order.

Beyond making a modest contribution to the city’s coffers, the roads masters’ office was designed to enable what environmental scientists, economists and geographers have called urban metabolism, in that it facilitated the input of produce and fuel and the output of effluence.47 *Viarii* did so through preserving Lucca’s material infrastructure, whose traversability was in turn considered beneficial, not only in a narrow economic sense, that is in terms of a steady and smooth flow of traffic into and out of the city, but also as instrumental to reducing health risks. Crumbling bridges, dissintegrating walls and potholed roads posed a serious challenge to the safety of people, pack animals and cattle, and by implication to the integrity of cargos and their timely overland delivery. But the free flow of matter through drains, gutters, aqueducts, canals and rivers was crucial to efficient waste disposal and thus to the reduction of miasmatic threats. Fixing potential hazards or avoiding nuisances altogether therefore
constituted a preventative program created by Lucca’s magistrates to serve their own agendas.48

The officials’ fiscal records in particular attest the government’s major involvement in caring for the city’s fabric, be it by directly paying rural communes or through covering the fees of numerous suppliers and workers. In one semester in 1336, for example, the officials spent nearly 350 lire on just such efforts, a handsome sum in contemporary terms, assuming that much of the work was carried out by unskilled laborers earning a pre-plague average daily wage of 4 soldi and using inexpensive, local materials.49 The ledgers also allow us to assess how effective they were in collecting the fines meted out by their court, and the extent to which this income contributed to the city’s upkeep. Between February and June 1344, for instance, the officials collected 76 lire, 11 soldi and 5 denari from individuals and communes, that is roughly 20 percent of their 1336 expenditure.50

These data hardly conjure up a rosy picture of medieval healthscaping. After all, the very existence of the tribunal, as well as the contents of its extant records, underscores that the viarii’s role in promoting the city’s health was riddled with tensions. For instance, the task of supervising furnaces, used in several industrial processes, was likely a contested mandate given urban guilds’ claims to legitimate authority over their members and determining their rights and duties.51 City councils no doubt struggled to balance the professional needs of artisans such as tanners, dyers and the city’s bustling silk sector, with the dangers that uncontrolled access to water might entail for the general population. The impetus here is important: on the one hand, it seemed senseless to prohibit the disposal of industrial waste without providing adequate
alternatives. On the other, and as some of the examples cited above imply, the power of guilds was apparently no longer sufficient (at least in the eyes of the regime) to dismiss general concerns with waste management, which was already emerging as a major health concern. In this sense, the broad mandate given to Lucca’s roads masters articulated a genuine—if somewhat ambitious—public perspective.

The presence of such political tensions likely drove urban governments like Lucca’s to develop public health policies, well before the onset of Black Death. As discussed in this book’s introduction, the plague epidemic commencing in 1347 and its recurring visitations are often seen as pivotal. The development of quarantine measures, the resumption of extramural burials (a practice far more common in Antiquity than the Middle Ages) and the establishment of health boards, to take a few celebrated examples, are understood as direct and original responses to the initial visitation of plague. Despite these measures’ contribution, they did not exhaust the range of communal prophylactics in the Middle Ages, as the viarii’s earliest records attest. The organ’s willingness occasionally to record its proceedings in the vernacular offers further testimony to the broad significance of public health for urban dwellers well before the plague’s onset. Litigating in the local dialect surely reflects changing patterns of literacy among the urban administrative classes; but no less important was the need pro-actively to explain regulations to non-elites, including women, day-laborers and domestic servants, who, as both the statutes and the court proceedings confirm, were held responsible for the city’s order and cleanliness.

By July 1347 at the latest, and thus still before the plague’s initial strike, the roads master recorded public ordinances or bandi made on their behalf in
the vernacular (see appendix 2): yet another documented attempt to reach out to local residents of lower status. For, as their colophons indicate, these communiqués were meant to be read aloud throughout the city several times a year. \(^5^3\) While such vernacular announcements repeat in essence the officials’ established statutes, they specifically underscore the universal responsibility of local residents, citizens or foreigners, and of whatever status, age or gender, for maintaining the city’s hygienic standards. For instance, no one was to slaughter animals or wash them near a well; no one was to dispose of carcasses improperly; all residents must clean the areas in front of their own houses every fortnight; and all must keep the public ways clear of obstacles. Finally, perhaps as a matter of convenience, but more likely reflecting the nexus of civic morality, religious piety and urban cleanliness, every Saturday and feast vigil residents had to clean the road in front of their houses. The texts repeatedly conclude by stating that anyone could denounce environmental offenders, in which case the accuser’s testimony would be considered more credible by default and would be rewarded a certain part of the value of the imposed penalty in case the prosecution were successful (see also appendix 1).

By recourse to methods such as making public announcement in the vernacular, Lucca’s *viarìi* sought to expand the statutes’ audience as a means to increase residents’ health literacy or at least their awareness and cooperation, a phenomenon usually associated in the scholarly literature with post-Enlightenment approaches. \(^5^4\) Communicating directly with a broader segment of society was desirable since it is plausible that many violations were witnessed by members of the social underclass, men, women and children who needed to be encouraged to participate more effectively in patrolling normative
environmental borders. At least in one case the strategy paid off. On 20 April 1352 the innkeeper (hospitator) Lippo Salvini was secretly accused of littering a public way. He denied the charges, but two domestic servants living next door, Liccio Nuti and Cecco Lemni, testified to having seen Lippo throwing human waste from his balcony (“de dicto balchione fore derivatum in viam publicam proiecit”). Two months later, Lippo was fined 28 soldi. It seems that, whoever the original denouncer was (the servants’ employer? they themselves?), the accusation was either prompted or at any rate validly supported in court by men of lower status than that of the innkeeper. The servants’ central role here attests both the accuser’s legal upper hand and the kind of witnesses the roads masters could and often had to rely on in practice, and who helped buttress the government’s biopolitical claims.

Conclusion

Statuimus pro bono et sanitate hominum—“we decree for people’s wellbeing and health”: so proclaim the Lucchese officials’ statutes. And, as its registers attest, in practice rather than only in theory, the city’s rulers and residents actually maintained or at least strove for what they understood—in their own terms—to be a healthier city. As such they offer a glimpse of a premodern society cognizant of its own need to identify and detect health hazards at the population level and the mechanisms it developed to obviate or at least reduce them. Some risk was avoided by maintaining and commissioning public works, while harm itself was reduced through publicly prosecuting offenders who neglected the upkeep of workshops and roads, bridges, aqueducts, canals, latrines, gutters, wells, troughs and walls belonging to them personally or assigned to them collectively.
None of these endeavors was necessarily altruistic or an indication of successful centralization. The proliferation of expertise precisely in the context of a thriving city, with a strong artisanal sector, powerful ecclesiastics, high literacy rates and an expanding hinterland, meant that urban officialdom had more to push against than before if it wished to assert its power and defend its authority. But whatever the limitations of its success from a modern preventative point of view, Lucca’s governors espoused healthscaping as a staple concern and an active pursuit. As the following chapters will demonstrate, they were hardly unique in doing so.
Chapter Three

Bologna’s *Fango* Officials

Introduction

Few medieval cities could boast a greater array of medical learning and services than Bologna, Italy’s primary intellectual hub and a major commercial and religious center of the northern peninsula.¹ As the city’s residents and governors were well aware, however, their lives entailed unique and serious health risks as well. Among the hazards they would have listed one could certainly include sins such as greed, scandals and the usual slew of moral dangers besetting Europe’s proliferating cities, for instance in the shape of prostitutes, Jews and unruly lepers. Yet Bolognesi routinely remarked specifically upon bodily and environmental threats to their safety and wellbeing. Crowdedness, filth, violence, corrupt produce, noise, rampaging animals and blocked waterways: one does not have to embrace a sordid image of the Middle Ages in order to recognize what lurked (or was thought to lurk) among the city’s streets, homes, taverns, canals, workshops and markets. As in Lucca and elsewhere, so in Bologna, residents remained alert to such threats, and numerous documents attest that concerns about and approaches to population-level health were a central, if still poorly understood, aspect of local history.

The late thirteenth century saw Bologna’s population peak, probably at around 55,000-60,000. By the very early fourteenth century numbers began to decline and then downright plunge with the onset of plague in 1348, a pandemic whose visitations upon the city continued, as they did elsewhere, for many decades to come.² But here, too, preventative activities far predated the Black
Death, the establishment of quarantine facilities and the appointment of health boards. Many of these routine efforts are captured in the registers of Bologna’s fango or dirt official, a local and superbly documented parallel of the peninsular viarius studied in the previous two chapters, and the camparius, to be explored in the next. The fango’s copious records allow us to observe how healthscaping measures were conceived, what they meant both before and after an alleged sea change in public health history, who was involved in these activities, what kind of behaviors were targeted as public health hazards and how, and what means did one local government provide across several late medieval generations for deterring, detecting, prosecuting and punishing offenders.

Bologna’s magistrates charged their dirt masters with the overall upkeep of urban infrastructure related to health, safety and cleanliness. In other words, fango officials, much like roads and works officers elsewhere, monitored both physical sites such as bridges, streets and wells, and human and animal behaviors thought to impact them, from waste disposal, to building activities, to travel, play, industry and commerce. Prior to the advent of police forces and fire brigades, and both before and after the establishment of health boards in the late sixteenth or early seventeenth century, these men were the regime’s eyes, ears and noses on the ground. To be sure, they were decidedly not the only residents (or even officials) entrusted with Bolognese wellbeing, not to mention civic order. But they are currently the most richly documented government bodies to have pursued this goal, and their records reflect formal definitions and responses to health threats as well as residents’ and visitors’ apathy or even resistance towards them. As such, they reveal how biopower was negotiated on a daily basis in Bologna, often involving conflicts over the use of space, artisanal
products and even animals, all of which were integrated into programs and anti-
programs straddling private and public spaces.

Unlike Lucca’s curia viarum, Bologna’s fango series has received some
scholarly attention over the years, especially from local historians, who have
variously underscored their value for tracing processes of state building, as an
inroad to understanding communal and post-communal ideologies and as a
source for studying urban social marginality and the city’s morphology. Most of
these studies have been substantially based on the statutes prescribing the
officers’ remit and conduct, although some have tapped its daily reports,
accounts and summary justice records. All of these, but especially the latter texts,
allow us to see the officials at work, shaping and responding to the urban
environment, for instance through inspections “ad oculos,” resolving neighborly
disputes (questiones) and making public announcements (gride); or else by
purchasing provisions, hiring workers and prosecuting those who violated
sanitary statutes. Despite this modicum of scholarly interest, however, the
present chapter is the first to explore the outfit’s scores of surviving registers up
to the year 1400, allowing us to see a teething institution and its shifting
challenges from before and until well after the onset of the second plague
pandemic.

Bolognese evidence for roads masters’ activities is probably the richest
for late medieval Italy, and as such arguably for Europe as a whole. By
comparison, Pinerolo’s camparii have left merely six organic registers behind
(the basis of chapter four) and for the Lucchese viarius, explored in the previous
chapter, that number rises to thirteen for the period 1336-77 (although the
records of the organ that subsumed it, the fondaco, are far more numerous for
later centuries). The Bolognese series, therefore, provides the most granular view of public supervisory and prosecutorial activities, and through them recalls the city’s history of defining and coping with major health threats. Far from a linear development, what these sources reveal is a complex process of building resilience that involved different stakeholders, who in turn participated in and promoted different systems of power and knowledge. First, however, let us trace the officials’ early days and mandate.

The *Fango* Official: Origins and Normative Scope

By some accounts the dirt masters have deep roots in Emilia-Romagna. Since the late twelfth century several *scarii* or *yscarii*, works supervisors whose regional presence can be traced back to the early eighth century, maintained Bologna’s roads, bridges and waterways, alongside monitoring other at-risk sites such as piazzas, markets, gates and industrial areas.\(^5\) In all likelihood their responsibilities were gradually separated and redistributed under increasing demographic pressure and reflecting the city’s physical, demographic and economic growth. The 1250 redaction of Bologna’s statutes records a new group of officials, namely the “four men replacing the *yscarii*” (*quattuor in loco yscariorum*).\(^6\) and in 1252 the organ assumed the more common appellation (from a peninsular perspective) of “suprastantes viarum et aquarum,” directly answerable to the podestà.\(^7\) In 1256 the statutes rechristen the group as the “supervisors...of dirt throughout the city” (*soprastanti...ad fanghum per civitatem*),\(^8\) a title that will accompany the outfit throughout most of the later Middle Ages.
The dirt masters' remit overlapped substantially with that of the previous organ, including the protection of artisanal standards, produce, weights and measures. Representing each of the city's residential quarters, these men required no advanced training or background, yet they were subject—as their colleagues elsewhere had been—to certain anticorruption measures. For instance, given the centrality of watermills to their remit as major production sites that both caused and were threatened by intermittent water flow and water pollution, the 1267 statues forbid the fango officials from owning mills during their tenure. And they were also prohibited from consuming food and drink in taverns, sites they were expected to supervise intensively.

In terms of their specific responsibilities, fango officials swore to ensure the flow of sewers and latrines, and to fine people up to 20 soldi for placing filthy water, trash, dung, carcasses or prison filth (turpetudine carceris) on public squares and streets. (Prisons were a relatively new addition to the governing apparatus of Bologna and thus very much in the public eye and centrally located.) They were to see to it too that butchers slaughtered and skinned animals far away from public squares, including that of Santa Maria dei Rustignani, that these piazzas were cleaned once every eight days, and that no latrines were installed near the city gates. The latter, more generally, had to be kept clean, their gutters flowing and covered whenever located in or observable from public places, in order to avoid "stench reaching those passing or living near it" (quod fetor veniat transeuntibus vel ibi prope habitantibus). In terms of their remit and its explicit link to promoting communal prophylactics, then, the fango officials were typical constituents of the peninsular healthscape.
Nor was the inherent tension between center and locality explored in chapter one absent from Bologna either. Reflecting the government’s growing political and territorial aspirations, towards the end of the thirteenth century the group of four fango officials was to be replaced by a single officer, one of seven notaries in the podestà’s entourage. Profiled as an “experienced man who will know how to deal with the issues pertaining to his office,” this notary (whom the administrative sources regularly refer to as the fango official) was required to ensure passbility and cleanliness in the city and its hinterland. The city’s four quarters henceforth no longer play a formal role in the upkeep of local infrastructures, although the same statutes do issue a call for the election of rural aquiroli or watermen, to monitor the flow of water within their districts, including the upkeep of bridges.

The single fango notary’s ambition and self-confidence only highlight the degree to which he had to rely upon compliance or participation from below. Individual Bolognesi were required to gather all forms of dirt and filth lying directly outside their domiciles (and presumably from within them as well) and place them at their private entrances, whence the fango official would have them transported. Residents also had to clear the ditches running alongside their properties in order to ensure the smooth flow of water, and they were forbidden from hosting vagrant lepers, blind persons and false beggars, social undesirables who presented combined physical and moral dangers. Furthermore, no one was allowed to keep sows and piglets within a mile of the city walls, allow pigs into the city off-leash or bring them into the city even on a leash between the calends of May and the Feast of St. Michael (29 September), presumably because this was a farrowing period. Last but not least, elaborate
rubrics on the proper construction and upkeep of private latrines underscore the fear of pollution and harm their misuse could generate on the one hand, and the urgency of cooperation between residents and the government on the other.¹⁷ As we have seen in both previous chapters and the prologue, regulations about commonly shared sites could often impact private lives, thereby challenging the location and significance of traditional boundaries between the private and public domains.

Beyond monitoring individual households’ compliance, the fango official had to supervise the commercial and production sectors. He was to ensure, for example, that butchers and fishmongers kept the communal square and markets clear of “any fetid meat or offal” (aliqua animalia fetida vel morticina) and refrained from slaughtering within four houses of the piazza. Successful accusers would be eligible for half of the 40-soldo fine that would be imposed in such cases.¹⁸ No industrial waste moreover could be licitly disposed of by pouring it into water vessels within the city except the Aposa or Savena rivers “when they flow, that is only during the night and after the third bell rings, and nowhere else or at no other time.”¹⁹ Nighttime waste disposal made sense from a public health perspective since, given strict curfew laws, ocular intromission and the inhaling of foul odors were less likely at that time. In addition, various industries such as brewing, dyeing and baking likewise required a fresh supply of clean water. For those living directly along the rivers, however, the regulation could prove to be a double-edged sword, privileging them in terms of disposal while exposing them at least to the scent of larger amounts of waste or even worse in case of a blockage. During the day, at any rate, it was ultimately the podestà’s responsibility and consequently the fango official’s task to ensure that refuse
water remained flowing, enclosed and concealed, and prevent “that passersby might see filth or encounter stench” (\textit{transeuntes possent videre putredinem vel fetorem habere}). In sum, as was typical across the peninsula, so in Bologna, the local roads official played a key part in municipally-coordinated preventative programs.

Fig. 3.1 The Reno canal

Urban metabolism depended on the regular flow of water. Bologna was typical of many Italian cities in developing a network of canals connecting its main water sources (the Savena and Reno rivers, in this case) with parishes and industrial areas, supplying them with fresh water and hydraulic energy as well as a means to dispose of waste.

Image by the author
The next redaction of the statutes to come down to us dates to 1335, a year after Bertrand du Pouget (1280-1352), the papal legate and Bologna’s first signore, was shown the city gate after eight years in power. Although Bologna had already entered its despotic era, its basic administrative structure remained largely intact, including its roads master. However, given that the podestà’s entourage was made up of foreigners, the pressure to revert to a more recognizable term from a peninsular perspective may have led to renaming the fango as the officio stratarum, poncium et aquarum (“The office of roads, bridges and waters”), whose notary is listed as ninth among the podestà’s aides. In keeping with his by-then traditional remit, the officer is referred to by the statutes as “the lord podestà’s notary in charge of filth” or waste (notarius domini potestatis ad inmundicias deputatus). Other than a marginal increase in specificity, promulgations bearing directly on the office in this redaction stray very little from those found in earlier texts, including the notary’s obligation to collect “fanghum” (clearly meant in the broadest sense of the term dirt), which was to be gathered by residents and placed at their doorsteps, and the population-level threats posed by loose pigs, misplaced domestic and artisanal waste, dysfunctional latrines and other defective or damaged infrastructure.

To judge by the statutes’ subsequent redactions of 1352, 1357, 1376 and 1389, the office’s profile and remit underwent only minor changes over the next several decades. The single significant departure from previous texts appears in 1389, in a rubric that commands (or acknowledges) a certain devolution of power from the centralized office to the city’s administrative quarters and parishes. Specifically, it states that a majority of residents in any of the neighborhoods (vicinia) can decide what maintenance works need to be carried
out and that their decisions must form the basis of the podestà’s and by implication the *fango* notary’s work plan.\textsuperscript{26} But otherwise the stability is remarkable, especially given the convulsive character of the middle and later fourteenth century: neither the onset of the second pandemic in 1348 nor its repeated visitations seem to have impacted the office, despite its obvious and explicit connection to urban welfare. In this too, Bologna’s roads office and the city’s preventative programs in general reflect a peninsular approach, which can hardly be described as apathetic.

Throughout the second half of the fourteenth century, then, and along with tangible government efforts to keep the city clean and traffic flowing, the *fango* notary continued to play a key role in managing several of the city’s main risks. Mostly under the aegis of the podestà and occasionally that of the capitano del popolo,\textsuperscript{27} he remained responsible for the collection and disposal of waste, overseeing public works, examining market stalls and produce, inventorying the presence of animals, curbing the accumulation of firewood and investigating the presence of social undesirables such as false beggars, gamblers, vagabonds and prostitutes. Beyond promoting a link between social marginality and disease, the persecution of social and religious deviants by this office also reminds us that promoting health in this period was rarely detached from avoiding sin, be it at the individual or population level.

The many extant statutes of Bologna confirm that the *fango*’s development was neither linear nor its specific focus permanent. In terms of the relations between center and locality, for instance, one official’s replacement of four representatives of the city’s quarters in 1288 did not end local residents’ involvement or the desirability of bottom-up input. Residents’ importance
remained high and even attained new formal recognition in 1389, as we shall see. It is admittedly hard to tell how closely the seesawing legislation on this particular matter reflects social realities or how effective it was in shaping them. Yet it is possible to see both centrifugal as well as centralizing forces in operation, and with many good reasons. Despite Bologna’s modest size, especially after the plague’s first visitation, governments relied on local knowledge for identifying health risks and enforcing preventative policies. Harnessing residents’ insight and motivation could be an efficient way to improve health outcomes (if that was the primary concern) under the aegis of a benevolent and legitimate government. Locals’ engagement thus allowed fango officials to deal with violations in shared sites rather than directly maintain streets and facilities at the neighborhood or parish level. Last but not least, at least the semblance of participation helped promote regime’s the legitimacy and hence its biopolitical agenda.

From Policy to Practice
More than in Lucca and Pinerolo, records of infrastructural upkeep in Bologna afford a unique opportuniy to move beyond the realm of preventative policy and into the world of healthscaping practices. The voluminous extant series, comprising hundreds of registers for the later thirteenth and fourteenth century, provide a granular view of these men’s activities and expenditures and how they interacted with other government officials, artisans, the urban population at large and of course health-related objects and sites. That is not however to argue that later medieval Bologna was an outlier in terms of its healthscaping routines. As we have repeatedly seen, similar offices were the rule, not the exception,
across the peninsula (and, as chapter five will stress, in cities and societies well beyond it). Parallel records for many other cities must have been destroyed or else remain far less accessible, having been folded into other, more general and still poorly indexed series such as criminal court records.28

Bologna’s fango records therefore provide an excellent vantage point from which to examine one urban outfit’s activities, including its officers’ physical presence, the types of violations they recorded, the spaces and artifacts they involved, those who allegedly perpetrated them and how they were handled from a legal and administrative perspective. The rich data these records of practice yield can in turn serve as the basis of a detailed (and dynamic) map of Bologna’s healthscape, as seen decidedly from officialdom’s perspective and spanning the pre- and post-Black Death periods. It is in sum a unique opportunity to reconstruct one type of a medieval state’s gaze, its biobehavioral disciplinary claims to power and the material and spatial elements involved in negotiating it in an alleged era of sanitary apathy and neglect.

To begin with the officer’s personal presence, the registers amply reveal the extent to which fango notaries actively engaged the urban fabric and tried to shape the city’s healthscape. Between early January and late April 1309, for instance, officials reportedly made seventy-three visits to commercial and production sites, that is nearly five visits a week.29 Between December 1329 and June 1330 the frequency of such excursions—or incursions, depending on one’s perspective—declined slightly at ninety over a slightly longer period, an average of more than one inspection every other day.30 Registers covering seven semesters in the period 1334-1337 chart a further modest decline in site visits, but the notaries still average nearly sixty-seven inspections, that is just over one
every three days. Charting these visits across time and space is instrumental, not only for establishing the notary’s degree of compliance with the statutes generally, but also for understanding specifically what kind of preventative policy was being enforced, and with what physical, occupational and social implications. In other words, establishing where and when the notary went—and not merely how often—can illuminate which places, activities and people were important for a particular government to claim as potential health threats and how that perception changed between seasons and more generally over time, also in light of exogenous events such as extreme weather patterns, war, plague or famine. In the cases just noted, for example, the notary’s physical focus was entirely and consistently on markets, artisanal workshops and waterways, suggesting a rather broad canvassing on his part and a general reluctance to enter private abodes.

Assuming these data were not entirely coincidental (or written only with the fango notary’s superiors in mind), they are open to different interpretations. On the one hand, they demonstrate that officials did not single out one type of potentially polluting artisans, be they candle makers or meat vendors, preferring instead to attend to less-contested public amenities such as Bologna’s waterways. On the other hand, the city’s canals served artisanal production as well, so enforcing cleanliness to avoid blockage was especially (or at least equally) a service benefiting private residents, above all those owning or operating mills or those directly influenced by their (mal)functioning. The evidence is thus ambiguous. Were fango officials in this period hedging their bets by refraining from targeting either private-industrial or public sites exclusively? Or were they consciously communicating what they found to be the greatest
sources of potential pollution, notwithstanding other residents’ concerns? And if so, what informed their view? Later in this chapter, we will compare these lists of site visits to a broader sample of records relating alleged violations and assess to what extent they reflect the fango’s daily beat, which consisted not only of self-initiated inspections but also of responses to private complaints. Either way, it appears that domiciles were not a frequent stop on their trail. As we shall see, moreover, for allegations concerning a decidedly private nature, fango officials waited for complaints to reach them (or recorded their investigations in this fashion) rather than actively seek them out.
Fig. 3.2 Bologna’s fango official en route

Bologna’s dirt master operated as the regime’s eyes, ears and nose while constructing and maintaining local infrastructures. The front cover of this fango register depicts an official holding a cane and descending from a fortified bridge stretched across a local river. The water is consciously rendered as flowing and abundant with fish, commonly associated with an image of health.

Source: Archivio di Stato di Bologna, Curia del Podestà, Ufficio delle acque, strade, ponti, calanchi, selicite e fango 21, reg. 4 (1355-1356), front cover.

By kind permission of the Ministero dei beni e delle attività culturali e del turismo—Archivio di Stato di Bologna, authorization no. 1235 (21 March 2018).

Significantly, the inspections discussed so far are listed as uneventful, that is the official detected no violation, entering “I encountered nothing” (nullum inveni; nichil inveni) into his logbook. When the opposite held true, the record usually contains a follow-up in the form of a summons, a fine or an inquest. And while the latter type of cases fill many sheets in the extant registers, they tend to be far less numerous than uneventful site visits. This ratio lends itself to several interpretations: a relatively law-abiding society when it came to major public hygiene byelaws, an incompetent, corrupt or neglectful official, or a combination of the two? Whatever their implications, in terms of keeping eyes on the street site visits tell only one part of the story. For, on the one hand, the official adjudicated numerous cases often brought to his attention by other officials and private individuals; and on the other, his main order of business, namely supervising public works, must have kept him constantly out and about, his presence simultaneously protecting and defining Bologna’s vulnerable sites and residents.
One pair of eyes, however focused and vigilant, was hardly deemed sufficient for pursuing communal prophylactics and the biopolitical goals of this office in every nook and cranny of Bologna’s dense fabric. It also risked providing an easy, isolated target for antagonized residents or would-be culprits. Accordingly, road masters seldom went on their inspection rounds unaccompanied by fellow officers from the podestà’s (or the capitano del popolo’s) *famiglia.* Moreover, the *fango* notary sought to incentivize artisans’ and vendors’ cooperation and expand his network of informants across the social strata. For while public health interventions could be stimulated from the top down, implementing them required broad and willing participation or simply cooption. Thus, in 1288, numerous parish representatives had to swear an oath that they would vigilantly protect Bologna’s infrastructure, specifically stating that they would observe regulations concerning domestic and industrial waste disposal, and report “those throwing dung or carcasses into public ditches or who keep buckets or any other vessel containing putrid or otherwise dangerous matter.” As in Lucca and elsewhere, so in Bologna, officials also deployed communal heralds to reiterate existing regulations and disseminate new ones, including the monetary rewards of successful accusers, as well as to report their capturing of loose animals and discarded produce and invite claimants to collect both. Cleaning campaigns were similarly announced with *gride,* as on 9 October 1296, when the official ordered residents to clean the streets and public spaces from “dung, dirt…and any waste within three days under pain of 20 soldi.” The more eyes on the street, they reasoned, the cleaner and safer the city.
Health Discourses and Preventative Programs

Oaths and heralds hardly guaranteed residents’ cooperation with a regime’s preventative program. Indeed, much of the extant records provide rich evidence to the contrary. Furthermore, health-related prescriptions in the sources usually assume that rather than explain why fecal matter, grease and industrial waste are dangerous (*periculosum*) or otherwise undermine community well being, much like when investigating the illicit presence of Jews, rebels, gamblers and prostitutes.\(^38\) Carters allowing their oxen to roam free, laundresses toiling upstream, wine merchants fiddling with measures and residents diverting or blocking ditches are routinely cited for the damage (*dampnum*) or the destructive nature (*ruinatio, devastatio*) of their actions; but the harm itself remains mostly unstated, or else is expressed in material and moral rather than biological terms. (A similar problem plagues the interpretation of sources regarding the upkeep of infrastructures in the city’s hinterland, as we will see in the next chapter).

On occasion, however, more explicit health-related statements come to light. On 24 January 1285, for example, a *fango* notary named Orlando threatened four neighbors with a fine of 100 soldi each should they fail to enclose the sewer running along their street so that “no putrid matter or filthy water may exit from it” (*ita quod nulla putredo vel aqua turpis egrediatur*).\(^39\) On 16 August 1287, the *fango* notary Bonifazio ordered two men to clean the *piazza maggiore* and the city’s quarters from any and all filth “on account of the danger that threatens and can threaten the city of Bologna.”\(^40\) And on 13 January 1295, five men in possession of open latrines near their domiciles had to seal and enclose them within eight days “so that they could not be seen by passersby.”\(^41\)
These were not merely aesthetic interventions. For, as the previous chapters have discussed, medieval optical theories of emission and intromission held that the perceiving eye could absorb an object’s qualities, be they detrimental or favorable to one’s health. Accordingly, dead organic matter such as dirt, blood, dung and especially carcasses were perceived as threatening those who saw it. When the records invoke the sight of dirt or decomposing matter they do so invariably in a pejorative sense, alluding to these objects’ dangerous properties and accusing violators of compromising public health. To acknowledge this is to reveal an important layer in the fango’s court documents, which has so far mostly been overlooked.

Foul odors were believed to be another source of ill health, since medieval medical theorists, following Hippocrates and Galen, explained how stench could trigger disease by compounding an already deteriorated atmosphere. The odors’ origins could be diverse: sick people, rotting carcasses, stagnant ponds, filthy water and exposed latrines are frequently named as dangerous and damaging for this reason. And all of them were to be avoided, either by sealing, covering or burying the befouled vessel or through encouraging residents to minimize contact, apply ointment to the nose and mouth, carefully dispose of harmful substances and do so downwind and downstream from a populated area. With such broadly shared premises in mind, the fango’s records capture numerous instances in which communal health was purportedly being undermined by bad smells. On 1 April 1297, for example, a certain Visconte was charged with erecting two latrines over his gutter “so that filth (putredo) exits and stench (fetor) reaches the people who pass there and those who live nearby.” During his rounds on 2 November 1300 the fango notary Pagano
noticed that the gutter of Filippa, wife of ser Federigo Tedaldi of the San Antolino parish, was “uncovered,” as a result of which “a great amount of filth (maxima putredo) poured out into a public road and stench (fetor) reached the neighbors, which inflicted major harms (maxima injuria) on those passing by and commuting through the said street.”

The two main vectors of disease transmission—sight and scent—could of course be described as acting in concert. On 4 March 1299, for instance, a certain Michele denounced his neighbor donna Agnesia to the fango official for keeping a toilet (sedile) whose “filthy aspect and immense stench offends all those in the vicinity,” stressing moreover that the harm “befalls, not merely those living there regularly, but also those passing through the street, above all in the summer.” Michele's carefully honed appeal to a shared understanding of how human waste can both build and destroy a community helped strenghten his case. Yet it also played into officialdom's hands in legitimizing its role in such interventions, a triumph that took the physical shape of a well-ordered latrine, including its integration into the public sewage system. Similarly, in mid July 1320, the fango notary charged a group of residents for neglecting to maintain a latrine and its attached gutter, and ordered them to carry out an immediate repair “so that the stench and fetor would not emanate from them...and that the said latrine and sewers are cleaned and cleared...so that other putridity will not be visible.” In other words, what defined a successful mechanical repair was that the apparatus ceased to emit the harmful sights and scents adversely impacting those living and passing nearby. In Latourian terms, the latrine in both cases were linked to two preventative programs operating in a private and a public sphere. The first program was set up by an individual (donna Agnesia) and group of households,
respectively, in order to make their own waste disappear. The second, however, aimed at reducing foul odors and sights in communal spaces as a way to protect population health. Both programs made biopolitical and thus disciplinary claims, and while the former could certainly dovetail with the latter, their smooth interoperability involved subordinating private or local concerns to a city-wide agenda, which was (and remains) no mean feat.

Clashing or uncoordinated programs culminating in perceived threats to public health are visible well beyond negligent practices of domestic waste disposal. For example, on 9 November 1298, four butchers operating near the Porta Ravennante market were given three days to remove dirt (fangum) and trash (immunditia) from the public way before their stores. On 14 October 1314, Giovanna, wife and evidently artisanal partner of Piero the shoemaker, was fined ten soldi for hanging animal hides to dry on a wall in her parish, hides from which, as the complaint stated, the filth threatened to trickle into a local well. At times violations were more blatant, as when, on 13 July 1376, Mengolino Berti of San Sisimondo was caught carrying a dead horse into the campo fori, where he skinned and disposed of it. Such violations are presented unequivocally in the fango’s records as endangering their surroundings. The same held true for market vendors, especially fishmongers and butchers, who were fined throughout the fourteenth century for keeping rotting merchandise in their stalls or for operating in illicit locations or off-hours, possibly to avoid being monitored.

A historical analysis drawing on actor-network theory (ANT), such as the one attempted above and in earlier chapters, often seeks to challenge the assumption of stable social and political hierarchies. Its main advantage here is
that its focus on discrete links (non/human) in a network of actants (also known as a concatenation or assemblage) helps recover contingencies that the available records tend to obscure since they inevitably frame situations with a clear bias, usually foregrounding the role of officials and the justification for their intervention. The fango notary’s seemingly objective description of the four butchers’, Giovanna’s, Restarino’s and Mengolino’s offenses is already subordinated to a particular ontology and biopolitical claim. But in each of these cases those presented as public health offenders did not necessarily make choices on the basis of ignorance or spite. They could have simply been lazy or deviant, but it is also possible that they made a preventative choice to protect their own households, workshops or (as in the last case) parishes, in lieu of safe or at least convenient alternatives. In other words, reference groups even for preventative programs changed according to activity and status, including gender.

Offenders may have chosen to compromise a community's wellbeing, even within their own parishes, be it for private gain, comfort or ignorance.50 But on rare occasions the fango notary learned of what appears to be outright malice and sabotage. In mid August 1314, for instance, a case was brought against a certain Imelda, a domestic servant in the parish of San Gervasio, for intentionally dumping “dangerous trash” (periculas inmondicias) at night into a local well near the hospital of San Pietro.51 Even more explicitly, a year later a certain Pizolo Ghinacci, “spiritu diabolico” and under the cover of night, threw a large heap of filth (putredinem in magnam quantitatem) into a well in the Santa Lucia parish, apparently to avenge his mistreatment by some local women.52 Both incidents—which, to repeat, are untypical53—involve matter that is already out of place
(trash, filth) and whose inherent threat is then realized and maximized in diametric opposition to the preventative program the statutes lay out. Presented as devastatingly effective, both actions’ portrayal underscores strife within an intimate community, and implicitly present officialdom’s intervention as the only one able to resolve a dispute and perhaps limit its ruinous implications in the future. The entry thus reflects a hegemonic medical and political paradigm, promoting the regime’s biopolitical agenda. Yet it is also possible that those lodging the complaints in the first place employed the terms and tone they believed would work most efficiently to produce the desired result. After all, in neither case is there any mention of actual health consequences in the nearby sites.

From this study’s broader perspective, then, Bologna’s records demonstrate that some contemporaries either considered certain sights, scents, behaviors and matters to have a detrimental effect on health or knew enough about the theoretical connection between them to use it to their advantage. Magistrates certainly saw it as their duty to minimize residents’ harmful exposure, be it because they genuinely believed in their program’s positive health outcomes, their satisfaction from its promotion of their legitimacy, or both. In other words, even if none of those contributing to the production of the extant texts actually believed in or understood the underlying medical theories of disease transmission, at the very least they considered it a useful tactic to evoke sight and scent pollution when lodging an official complaint or promulgating an order. What is more, when Bolognese officials and residents translated such private concerns into social and legal action, it is possible to posit a link between medieval medical theory and public health policies. And
when the records capture individuals who employed a similar discourse as part of an attempt to enforce such policies, we can reasonably talk about the influence of certain medical ideas, either directly disseminated or otherwise present, and their appropriation by urban dwellers.54

Healthscaping and the Gaze of the State

Moving from the anecdotal to a systematic examination of the fango's records, the present section strives to achieve a better-grounded profile of Bologna’s public health-related challenges. It seeks to establish how these challenges were perceived and represented as part of the regime’s negotiation of biopower, based on a selection of seven registers from the period 1300-1379, a timespan that illuminates government healthscaping activities both before and after the onset of plague.55 Beyond their temporal distribution, these registers were also chosen for their completeness and clarity, which yielded rich information to buttress statistical significance and provide insight into contemporary concerns and behaviors. The data gathered cover a total of forty-three months in which 2107 accusations were made by the fango official or (far less frequently) private individuals. Insofar as the records allowed it, details were extracted on the gender, provenance and occupation of the offender/s, the type and location of the offense and its outcome. What follows is a first stab at analyzing the information.56

To recall, the fango notary had multiple responsibilities beyond maintaining urban hygiene. Procuring materials and contracting workers took the lion’s share of the office's budget, as was common throughout the peninsula. And yet, as the sources strongly suggest, the detection and prosecution of
offenders falling under the *fango* official’s jurisdiction must have been fairly
demanding time-wise. Allegations brought before him came in one of three ways.
First, while dirt officials spent much of their days outdoors, it is likely that,
whatever else they were focused on, wandering through local markets, accosting
carters and dropping in on artisanal workshops and domiciles could all be done
on a whim or following a tipoff. Any and all of these occasions could have led to
charging individuals with engaging in polluting or dangerous activities. Secondly,
other officials could have identified violations during their routines and passed
them on to the *fango* notary. Such cases likely led to an official inquest
(*inquisitio*), but it is far from certain that the investigation was always concluded,
resulted in a charge or adjudicated at the *fango* official’s court. Last but not least,
keeping eyes on the street were also Bolognese residents and visitors, who could
complain against offenders and offenses in their work or residential
environment, precipitating an accusatorial procedure (*accusatio*).57

Collectively these streams converged so that, every month, the *fango*
notary adjudicated an average of about fifty cases, albeit widely ranging per
month from one to two hundred and forty-five cases.
Fig. 3.3 Monthly charges brought before the fango notary

Source: Archivio di Stato di Bologna, Curia del Podestà, Fango 8, reg. 3 (1300-1301); 15, reg. 2 (1317); 20, reg. 1 (1334-1335); 20, reg. 2 (1335); 22, reg. 4 (1361); 24, reg. 4 (1369); 27, reg. 8 (1378-1379).

To contextualize these figures: the city’s regular criminal court dealt with an average of around one hundred and twenty cases per month in the late thirteenth century to as few as twenty cases a month in the early and middle of the fourteenth century (a decline preceding the onset of plague), before rising to a monthly average of about forty cases in the later fourteenth century.58 That is to say, the fango’s caseload was quite substantial in contemporary terms, especially given that, unlike notaries presiding over regular civic and criminal tribunals, he could dedicate only a fraction of his time to prosecuting offenders. However, given the nature of most violations this tribunal adjudicated, verdicts
could easily be pronounced on the basis of confessions and eyewitness testimony (not infrequently the official’s own) and sentences (overwhelmingly fines) meted out and presently collected.

Despite their laconic character, entries illuminate detection and prosecution activities at a high resolution, for instance by specifying charges made, persons involved, location and outcome. To begin with deviance itself, one way to impose a modicum of order on the matter is to divide the offenses described in the sources under the rubrics of commerce, neglect, filth, animals, blockage and safety. (In 17% of the cases I was unable to determine the nature of the charge.)

Fig. 3.4 Distribution of charges brought before the fango notary (cumulative)
Source: Archivio di Stato di Bologna, Curia del Podestà, Fango 8, reg. 3 (1300-1301); 15, reg. 2 (1317); 20, reg. 1 (1334-1335); 20, reg. 2 (1335); 22, reg. 4 (1361); 24, reg. 4 (1369); 27, reg. 8 (1378-1379).
A fair criticism of these categories is that they subsume diverse types of offenses under generic ones. To some extent that much is true of most categorizations and taxonomies, of course, yet the intention here is merely to demonstrate the intensivity, scale and interconnections between Bolognese concepts of civic order and public health.

For instance, most offenses under the heading of commerce appear to be technical, namely selling outside licit opening hours, away from designated locations, or else in the latter but without a license. Operating off-hours, off-site and especially without a license could also mean crowding a commercial space and hence causing blockage (see below). An equal if not greater danger implied by such offenses was avoiding the quality control officials (and guilds) provided in order to ensure that residents received healthy fish, meat, wine and produce, that the latter were not discarded in a way that endangered residents’ health, and that no illegal products such as arms were brought to market. Illegal weights and measures constitute another major subcategory within commerce, and here too the link with public health may appear to be tenuous, even though there are certain applications of weights and measures that could have an adverse effect on health, for instance regarding recipes and medicines. In any event, while promoting health may have been the impetus of prosecution in some cases, it is more likely that foremost on the magistrates’ mind was a desire to encourage honesty and transparency, thereby protecting the unity of the civic body. Once again, we observe how the moral, spiritual and physical attributes of health could be difficult to tell apart.59

Compared with commerce, safety is perhaps easier to relate to public health concerns. Prominent among this category of charges are artisans using
ovens or dangerous industrial materials recklessly and carters accused of neglecting the supervision of their wagons and beasts of burden. These charges differ from those raised against owners of animals whose presence in the public domain was forbidden in general or else only under strict supervision, which comprise the majority of cases falling under the rubric of animals (and we will accordingly see below how broad the spatial distribution of such allegations was). Yet even here the overlap between safety and health is substantial, as animals could endanger themselves as well as residents by attacking them or by scattering filth. In 1315 Treviso, to recall, pigs themselves were considered to be air pollutants from which “a great danger befalls people’s health.”

Blockage and neglect are likewise potentially overlapping categories. The main distinction here is between seemingly intentional and unintentional offenses, for instance placing dung on a public street or piling wood deep into a portico, in contrast with simple negligence of a leaking drain or gutter. Depending on what the gutter was leaking, an offense could be easily placed under the final category, namely filth. For the purposes of the present analysis, however, only when complaints explicitly mentioned pollution, environmental deterioration or threats to public health, were they placed under the latter category. As the chart above shows, overall these constitute a minority of cases (16%). But using this figure to gauge public health concerns in Bologna is somewhat misleading. As we have repeatedly seen, health risks lay immediately beneath the surface of numerous other offenses, meaning that the category of filth constrains us to think about public health from the limiting perspective of modern biomedicine. Either way, it is helpful to see these diverse charges as
targeting a nexus of threats that, at least in officialdom’s eyes, impacted health at the population level.

Nor was this image static. A closer look at the frequency and location of charges reveals a rather dynamic and complex picture of both continuity and change across the fourteenth century.

Fig. 3.5 Distribution of charges brought before the *fango* notary by register
Source: Archivio di Stato di Bologna, Curia del Podestà, Fango 8, reg. 3 (1300-1301); 15, reg. 2 (1317); 20, reg. 1 (1334-1335); 20, reg. 2 (1335); 22, reg. 4 (1361); 24, reg. 4 (1369); 27, reg. 8 (1378-1379).

Note, for instance, the reduction of filth- and blockage-related charges and the disappearance of animal-related prosecutions and neglect after Black Death’s onset, as well as the modest and dramatic rise, respectively, in safety- and commerce-related charges. While explaining these trajectories remains a
desideratum, the continuity of government efforts and residents’ complaints is itself significant. Plague may have impacted the pattern of problems experienced and the officials’ focus, but it is unlikely to have sparked an interest in developing communal prophylactics in the first place, or conversely to have triggered a breakdown of mutual aid or government services.\textsuperscript{61}

The same data allow us to explore particular interests, such as the role of gender in promoting or undermining public health. Women constitute 11% of those charged with environmental offences, a major underrepresentation of what presumably was then too around one half of the population. If we look at gender divisions by offense, however, some categories, such as gambling and safety, are entirely male domains, while others feature a somewhat higher (if still modest) concentration of women, especially deviant market vendors (16%). Yet even here female offenders are mostly grocers and herbalists detected working off-hours or off-site, while their male counterparts, above all fishmongers and butchers, clearly attract most of the \textit{fango} official’s attention during market operating hours. The discrepancy between women’s strong presence in the public eye, particularly in markets and certain artisan workshops, and their marginalization in these records is striking. On the other hand, it is of a piece with Italian governments’ tendency in this period to embrace a restrictive definition of female deviancy, which meant that women were far less intensively monitored, charged, prosecuted and indicted than men were.\textsuperscript{62} Official statistics reflect a view of women as homemakers rather than breadwinners, denizens of private rather than public spheres, and rather obedient ones at that.

What these records can tell us about Bolognese women goes beyond their capacity as health threats. Leaving aside the occasional wealthy widow or wife of
an artisan, most women charged by or before the *fango* tribunal were
laundresses and domestic servants, most of whom were presumably unmarried,
given medieval courts’ tendency to describe women in terms of their formal or
biological relations with men. The normative picture being promoted through
this office is thus conservative, perpetuating as it does classist and patriarchal
values. Here, riverbanks and parish wells featured as extensions of domestic
spaces in which women could carry out traditional tasks, but where they were
also more open than elsewhere to public, that is to say government, scrutiny.
Female entrepreneurship by contrast was treated with a modicum of suspicion,
as the relatively higher number of women among charged market vendors seems
to suggest. The occasional married woman captured in these sources at the
domicile is usually in violation of animal-related statutes, likely reflecting the fact
she was a *fango* official’s first port of call in search of an owner of a lost pig or
goat while her husband was out. When such cases move beyond an initial report
it is mostly the husband (or paterfamilias) who follows up.63

While the women captured by the *fango*’s net are mostly alleged violators
and agents of disequilibrium, they also emerge from time to time as defenders of
order and health. In this sense, official records shed positive light on
healthscaping activities at the informal, neighborhood level. The women of Santa
Lucia parish who denied a foreigner access to their well, the domestic servant
acting as an eyewitness to a polluting act, the green grocer who stood her ground
against an unauthorized competitor: official sources frame all of these actions as
buttressing officialdom’s preventative programs, whatever else or indeed
primarily they were meant to achieve. Gender thus numbers among the various
analytical categories that the *fango* records can help historicize from a unique
perspective, enriching our picture of late medieval society and segments of it that rarely reach the documentary surface. The same can be postulated for other key markers of identity and social status such as provenance, occupation and education, as well as variables ranging from seasons to political circumstances. How some of these elements shaped individual, corporate and government approaches to promoting health and fighting disease is the subject of the following exploratory paragraphs, which to repeat only skim the surface of possible analyses.64

By working in a Historical Geographic Systems (HiGIS) environment, it is now simpler than before to trace correlations between phenomena that may appear to be disparate or else expose existing blindspots in current views: the physical location of charges, identity markers of perpetrators and victims (including infrastructures), seasonality and other climate-related developments, and ostensibly extraneous events and processes, from economic downturns to political turmoil and from intensified rural migration to specific building campaigns.65 The results of analyzing the relevant data are difficult to convey graphically by means of static maps or slides of processes; animated media serves such purposes better but are impossible as yet to embed within printed books and articles. At any rate, what is ultimately displayed through such maps and on the basis of which data set/s involves numerous editorial choices, not all of which are obvious to the uninformed viewer.

To briefly explicate the major choices involved in producing the images below: A total of 2107 entries in the fango registers were mined for information about the charge raised, its location, date, whether the accused confessed, whether the case ended in conviction or acquittal, the sentence, whether the
culprit was absolved after conviction (for instance due to poverty) and whether a terminus for repairs was stated and the latter carried out. Wherever possible, the personalia of plaintiffs were extracted too, namely provenance, gender and profession. To establish locations, each charge described in the registers was georeferenced. Broadly speaking there were two types of identifiable sites: physical locations that were explicit and specific (e.g. a piazza, a gate, a crossroads) and parishes. In the latter case the current address of the parish church served as the location. The map underlying these images was taken from the historical atlas of Bologna assembled under the general editorship of Francesca Bocchi. It is based on a later street plan, which however shows the city's fourteenth-century walls and the waterways traversing it.

Approaching Bologna’s public health history on the basis of such information imposes certain limitations. For, as the first map below illustrates, the vast majority of offenses were reported or detected within the city's first (Roman) and second (twelfth-century) ring of walls, at a time when some of Bologna’s population certainly lived and worked beyond them. It is unlikely that health risks were absent outside the city center, however dense and lively it remained throughout the fourteenth century. Rather, the physical distribution of charges provides at best an indication of the fango officials’ beat, that is where they thought they could most efficiently (or most easily?) carry out their duties. And it was this choice which in turn defined what officialdom claimed as an at-risk public sphere. As we have seen, gazing officials neglected neither the city’s gates, waterways or surrounding hinterland, nor the numerous wells and workshops scattered throughout Bologna’s parishes. But the latter group was clearly lower on their priority list or otherwise less accessible (and thus prone to
discipline and less finable) to them. Either way, the emerging picture is one of strategic care and attention, not apathy and neglect.

Fig. 3.6 Location of charges brought before the fango notary (cumulative)

Source: Archivio di Stato di Bologna, Curia del Podestà, Fango 8, reg. 3 (1300-1301); 15, reg. 2 (1317); 20, reg. 1 (1334-1335); 20, reg. 2 (1335); 22, reg. 4 (1361); 24, reg. 4 (1369); 27, reg. 8 (1378-1379).
Fig. 3.7 below underscores in particular how commerce-related offenders were mostly concentrated in the city’s three market areas, the Piazza Maggiore, Mercato di Mezzo and Porta Ravennate, and to a lesser extent near the similarly busy Aposa, Castiglione and San Donato gates. Animal-related offenses, by comparison, are far more evenly spread throughout the city, with two major agglomerations near the Porta Saragozza and, equally unsurprisingly, near the Campo del Mercato, a space designated in the late thirteenth century away from the city center for the sale of cattle. It also seems clear that while the majority of the commerce offenders were local residents, animal-related offenders could come from outside the city as well. Both groups, at any rate, seem to have shared a low socioeconomic status occupationally, dovetailing with earlier scholars’ comments on the perceived conjunction of class and health.67
Fig. 3.7 Location and distribution of charges brought before the *fango* notary (cumulative)

Source: Archivio di Stato di Bologna, Curia del Podestà, Fango 8, reg. 3 (1300-1301); 15, reg. 2 (1317); 20, reg. 1 (1334-1335); 20, reg. 2 (1335); 22, reg. 4 (1361); 24, reg. 4 (1369); 27, reg. 8 (1378-1379).

These are merely preliminary observations, taking the cumulative data as a starting point in an attempt to explain continuity and change over time and
space. Establishing correlations and positing possible influences between data that are internal to the registers and extraneous events deserves far more attention that the present chapter offers. Did war, famine, earthquakes or other human and environmental processes, including construction of public and private facilities, impact prophylactic programs and people's behavior in microlocations? To what extent were seasons or religious feasts at play in promoting or undermining communal prophylactics? Did regime changes (a transition from communal to despotic rule, to take the obvious example) or even peaceful transitions that entailed a rotation in personnel benefit the fango notary's surveillance capacities or instead allowed more violations to go by unnoticed? And with what consequence to the city's population and the authority of stakeholders in safeguarding its health? These and other related questions go unanswered in the present chapter (and book), whose aim was above all to establish the presence of pertinent discourses and programs.

Conclusion

Bologna's history of healthscaping would be incomplete without at least mentioning the important role played by guilds, neighborhoods, hospitals and confraternities, as well as the regular input on health-related matters from the university's scholars of medicine and astronomy and traditional healers. Ideas and practices concerning birth, disease, diet, labor safety, product quality and diverse forms of charity and mutual aid have received much attention in these contexts. Moreover, the prognostications, prophylactic measures and cures debated by university scientists and medical practitioners were regularly communicated to—indeed eagerly sought by—governments and the general
population. That is not to say that policies or recommendations were always enthusiastically or widely adhered to. As is customary in the history of public health, population-level interests tended to be defined and pursued also in consideration of private and corporate agendas, and the welfare of the many rarely triumphed over that of the (powerful) few as a matter of course. In times of calm or during epidemics, healthcare- and medical professionals backed by the government met with criticism, apathy, and outright resistance in carrying out their duties. Unruly Bolognesi, then as now, had to be routinely reminded of their actions’ broader implications and encouraged to compromise.

Finally, looking beyond the chronological scope of this book allows us to observe the emergence of local health boards. Here too Bologna seems to have followed the trajectory of many Italian and European cities in founding—over time—permanent institutions of public health or Sanità. Unlike the fango office, these organs do not predate the Black Death and rarely served as direct responses to it, or even to the repeated visitations of the disease during the later fourteenth century. Indeed, most cities took a century or more, and numerous epidemics, to move beyond ad hoc responses to dedicated and stable institutions, personnel and budgets, whose stability was easily undermined. In Bologna as elsewhere, health-related connectivity between the city, its hinterland and other cities continued to develop throughout the fifteenth century, alongside government prophylactic measures already long in place. Given the intermittent nature of disease outbreaks, however, it is hardly surprising that local responses, even when organized around a new initiative or health board, did not immediately transform into permanent government organs.
Institutional ebb and flow seems to have ended with the onslaught of the plague epidemic of 1575-78, also known as the Plague of San Carlo. Reacting to the havoc it created, numerous authors across the peninsula began urging urban governments and regional princes to act more systematically through civic institutions of disease control and prevention. Bologna may have had something akin to a health board earlier that century, yet sometime between this event and the plague of 1630 a distinct organ gained a stable status as the Assunteria di Sanità. While permanent and influential, it usually sprung into action only when epidemics were thought to have struck, at which point its officials became responsible for inspecting residences, industrial and agricultural production sites, commercial traffic and even letters. It was these administrators who issued clean bills of health and authorized the entry and exit of people and products.

What historians, often writing with a modernist bias, might see as a delay in the rise of Bologna’s health board, therefore, can be partly explained through a combination of the city’s degree of administrative centralization, the political cachet and coherence of the medical profession, and the relative severity of plague. But whatever else may account for Bologna’s (and other cities’) path and chronology when it came to founding these bodies, it is also worth considering the role of existing offices such as the fango (and its peninsular and continental parallels) in providing inhabitants with a robust if imperfect solution to dealing with ongoing health threats. Indeed, in times of peace and in the absence of epidemics, it was precisely these and other humble city employees who tried to keep the city clean and its residents safe.
Chapter Four

Piedmont’s *Camparii*

Introduction: A Northern Tradition

Much of urban Europe was carved piecemeal out of its countryside: physically, socially and—as this chapter will stress—technologically. For, alongside political stability regionally and a favorable climate more broadly, it was ongoing rural migration, rather than high birth rates and low mortality rates, that underpinned cities’ demographic growth from the eleventh century onwards. What is more, urban dwellers across the socioeconomic strata relied on (and were to a certain extent limited by) their hinterlands for income, labor, nourishment, energy and waste disposal, in the era that followed Europe’s first great wave of urbanization.¹ Contrary to Henri Pirenne’s portrayal of medieval cities as uniquely isolated, city residents maintained deep and continuous ties with the countryside, even as they began to view the land more as a volatile food basket than a place of safe habitation.² A recent historian may have overstated the case in arguing that medieval urbanization turned the countryside into a “landscape of fear,”³ but urbanites’ confidence in being able to meet their own needs meant coming to terms with new health risks and develop ways to manage them, including by policing the urban hinterland.

A shortage of records from and about the countryside can obscure just how indebted urban centers were to rural practices, also when it came to preventative healthcare at the population level. This is usually the case even for an otherwise well-documented urbanized region such as central and northern Italy.⁴ Yet, as this chapter argues, here too there is significant evidence for how
regularly cities appropriated rural infrastructures and policing techniques for the benefit of urban populations. These concerned both the conduct, distribution and preservation of water, produce and animals (known in economic circles as “energy input”), and ensuring the traversability of land and water to allow products and waste to leave the city freely (“output”), also in order to prevent miasmatic odors from developing within the walls. And while cities may not have followed identical paths to securing their resilience, regimes throughout the peninsula promoted such measures consciously and aligned them with a clearly defined urban agenda in mind. Such local processes collectively underscore how essential rural expertise and technologies were for keeping urban populations healthy and life within the city walls attractive to newcomers, the lifeblood of urbanization, then and now.

Throughout the alpine foothills, in the peninsula’s northwest, peacetime hinterland policing often fell to a group of men known as camparii (Italian: campari) or field masters, a title betraying the extra-urban focus of this decidedly urban outfit. (Presumably, those acting on behalf of a village would have simply been called guards or custodi.) In an insightful article, architectural historian Hendrik Dey traces a semantic shift in the Latin term campus (Italian: campo), namely from rural field to urban square, especially in later medieval Italy and in lockstep with the region’s intensive urbanization. There is no evidence for this particular development in the Piedmontese sources at the basis of the present chapter, which should come as little surprise since they mostly concern the countryside. Nonetheless, be it in parallel with or indeed as an extension of the process recovered by Dey, urban regimes began to identify and construe certain types of deviancy in private fields as tantamount to threats on
the public good, much like they did in urban domiciles and commercial and production sites within cities. The development was thus consistent with government efforts at centralization and the deployment of health and safety discourses reconstructed in earlier chapters. Fields, even less than the roads and canals dissecting them, may not have become an emblematic public site like the city market or square. Yet defending their sustainability—and roads’ and canals’ traversability—was certainly cast by officialdom as a public prerogative, serving among other goals the health of urban communities. That health included most obviously what would reach—and leave—local kitchens and dining tables, markets, ovens, mills and other production sites.

Camparii’s healthscaping efforts are sporadically attested across Piedmont and somewhat more consistently in Pinerolo, a town nestled in the Val Chisone some 50 kilometers southwest of Turin. Here, six registers survive for the late thirteenth and early fourteenth century, directly documenting the field masters’ enforcement activities. As we shall see, field masters were ubiquitous in the region, and given the relative paucity of evidence (as compared with Lucca, our first case study, let alone Bologna, our second), it seemed helpful in this instance to situate the Pinerolese example in a slightly broader context and on the basis of both normative and other sources from several adjacent towns. More deliberately than in the previous case studies, these texts allow us to draw a link between maintaining communal infrastructures across the urban-rural divide and its perceived significance for promoting residents’ health and regimes’ biopolitical agendas.

Stressing the preponderance of camparii in Piedmont, at least relative to other regions in the peninsula, does not amount to claiming that local viarii were
either scarce or less influential locally in pursuing preventative agendas. Urban policing was hardly a zero-sum game in which one organ's rise signaled another's decline, however logical or indeed desirable that may appear from officialdom's perspective. *Viarii* and *camparii* seem to have co-existed in early fourteenth-century Nizza Monferrato, for instance, although the former, who were nominated per inhabited street, were less centralized than the latter, who were appointed on behalf of each of the city's thirds.9 (Incidentally, the city's damage assessors, first mentioned in 1354, came into being as an entirely centralized organ, justified in the statutes by vaguely chastising the *camparii* for doing more harm than good, “for many reasons and causes.”)10 Similarly, in early fourteenth-century Ivrea, neighborhood supervisors (*sorestani*) were put in charge of each paved road within the walls, yet they had six extramural counterparts, two from each of the city's thirds, responsible for maintaining the roads and bridges leading into their neighborhoods.11 Roads officials' remits were also meticulously laid out in the late fourteenth-century statutes of Asti, which called for the election of two men and a notary from each of the city's quarters.12 Yet the same text also proposed the appointment, possibly upon request, of men tasked with monitoring the presence and movement of people, goods and animals in the hinterland, as well as the introduction of permanent officials, two per city gate, responsible for denouncing individuals suspected of entering the city with materials stolen from the countryside.13 Some towns, finally, such as Saluzzo, relied on *massarii viarum* to the apparent exclusion of *camparii*, despite having possessions in the hinterland as well.14

*Viarii*'s exclusivity in Saluzzo, however, did not translate into documentary traces in the archive, a state of affairs that seems to be typical for
the region as a whole. Indeed, a sustained attempt to trace documents produced for and by Piedmontese *viaritii* and their health-related activities yielded little more than occasional mentions in city council deliberations and account books in a handful of towns.\textsuperscript{15} *Camparii* in general, and Pinerolo’s especially, thus come to the foreground in part because of the availability of their own records. Yet in tracing both the agendas and norms regulating field masters’ activities as well as their documents of practice, it becomes clear that they often complemented *viaritii*’s actions (also in collaboration with the communal damage assessors mentioned above and in chapter one), sometimes to the point of meshing.

Pinerolo is a uniquely well-documented case in point, in sum, but it is otherwise typical, at least of one major Italian region.

Given Pinerolo’s relative obscurity outside the region’s Italian and French historiography, the present chapter begins with a brief sketch of its history up to the later Middle Ages, before exploring the records pertaining to its *viaritii* and especially *camparii*. After distilling these bodies’ roles in monitoring the health and safety of Pinerolo’s residents, we move to discuss what the extant registers tell us about their enforcement practices and how these in turn shed light on the biopolitical agendas that the city’s rulers pursued in the later thirteenth and fourteenth century. A final section zooms back out of Pinerolo to underscore *camparii*’s ubiquity above the Po and hence the importance of integrating their tasks into a broader picture of peninsular healthscaping practices.

**Pinerolo: From Rural Stronghold to Urban Center**

While the Val Chisone was certainly inhabited in pre-Christian times, Pinerolo itself, unlike Lucca and Bologna, displays no specific Etruscan or Roman roots.\textsuperscript{16}
The earliest mention of a settlement on the town's present site appears in a charter issued by Otto III sometime before his imperial coronation in 996, and economic activity is first attested in a bequest of half of its market to the monastery of Santa Maria in San Verano by Adelaide, Countess of Vermandois, in 1075. The donation was expanded in 1078 to include the local *castello* and *curia*, that is, a small regional court, solidifying the abbey's control over the teething town. A charter issued in 1159 by Frederick Barbarossa confirms that, by then, Pinerolo had its own rural district and was also home to at least two churches, San Donato on the plain and San Maurizio in the castle area, each served by two canons regular. A distinction between the location of the elevated castle (*borgo superiore* or simply *borgo*) and the plain beneath it (*borgo inferiore* or *piano*) continued to define Pinerolo's basic spatial and administrative division for centuries to come. The two units were connected by gradated alleys and enclosed by a single ring of walls, with two gates opening into each section. Seven streets crisscrossed the town, which by 1220 also possessed a civic hall, a designated deliberation chamber and a hospital (*domus hospitalis*).

Pinerolo's transition from a feudatory settlement, by and large agriculturally oriented, into an autonomous commune with greater occupational diversity, appears to have been a fairly peaceful process. This was likely enabled by the Savoy expansion into Piedmont and its scions' willingness to grant, concede or simply recognize the liberties of sympathetic settlements to which their competitors (often a local bishop or, as in this case, a monastery) laid claim. Formally, Pinerolo's incorporation was completed by July 1220, with the confirmation of the commune's first set of statutes. The latter text is presented as an agreement reached jointly by the commune's elders (*sapienti*) and Thomas of
Savoy (1178-1233), Count of Flanders and the subregion’s new overlord. The first set of statutes and their later redactions provide the normative backdrop to the town’s preventative health policies examined in the next section. Yet suffice it to say at present that, as is often the case, self-government could not have been entirely absent from the town in previous decades. For instance, the statutes obligate the count’s representatives, present and future, to enforce all previous sentences and collect all fines imposed by the pre-existing magistrates. They also had to implement the urban development plans already set in motion, such as the new canal being dug.¹⁷

Between the twelfth and the late thirteenth centuries, the urban population and physical fabric of Pinerolo grew significantly, reaching a pre-plague peak of around 1800 households (fuochi or hearths) or an estimated 8000 persons. This figure gradually declined in the fourteenth century to just under 4000 inhabitants, likely reflecting the outcome of repeated plague visitations and an insufficient flow of rural migrants.¹⁸ A common litmus test for urbanization, originally proposed by Jacques Le Goff, is the arrival of Franciscan friars, alongside the foundation of a local convent for the Humiliati outside the city walls, by the mid thirteenth century. Sufficient excess wealth was presumably produced to support religious mendicants and fund their preaching and charitable activities.¹⁹ A new palace began to materialize around 1318 by the newly arrived Acajas to replace the old castle as the rulers’ main residence. More bell towers and churches began to dot the cityscape. A tug of war ensued between the residents of the borgo superiore and their lower-lying brethren, who called for the weekly market to be held in their more accessible and likely more populous part of town, away from its traditional and more defensible location up
the hill. Their attempt was only partly successful. Military confraternities and artisanal guilds began to flourish, eight new hospitals (all modest in size) were founded by the fifteenth century to augment the single *domus hospitalis* mentioned in the 1220 statutes, and the Poor Clares established their own convent. The commune purchased additional lands and properties, and even attracted the famous Dominican preacher Vincent Ferrer (1350-1419) to come and enthuse locals.
Fig. 4.1 Pinerolo

Detail from a drawing by Bertino Rivetti (1558), showing the upper and lower borghi. The work, containing the first known depiction of Pinerolo, was produced in the context of a dispute over water rights.

Archivio Storico della Città di di Pinerolo, Tipo antichissimo dimostrativo del torrente Chisone presso Pinerolo ed Osasco (Mappa Riveti), 1558 - Categoria LXII, Tipi e disegni, faldone 3328, fascicolo 1, n. 1.

By kind permission of the ministerio di beni culturali, Archivio Storico della Città di Pinerolo.

Throughout this period, legislators paid regular attention to the health risks attendant upon the burgeoning town, in contrast to one local historian’s claim about “the total absence of any hygienic measures” in medieval Pinerolo, or to another’s that street cleaning became a concern only in the fifteenth century. The 1220 statutes, for instance, prohibited the sale of diseased meat, defining it as “flesh from sick or infirm animals” (illicitas carnes, id est morticinas vel infirmas), under pain of 20 soldi. A fine of 12 denari awaited anyone disposing of a carcass within the walls’ enclosure, an area in which it was also forbidden to administer phlebotomy to horses, under pain of 2 soldi. In 1318 the magistrates called for the annual nomination of three massarii viarum, including one notary, to see to the “refurbishing of the commune’s roads and bridges” (super refectionibus viarum et pontium communis Pinerolii). They were to earn 20 soldi each, in return for which they had to inspect and maintain all roads weekly and were given the power (potestas) to build new ones “for the benefit of the commune” (pro utile communis). Drawing an explicit link between their remit and residents’ health, one viarius monitoring the via Rigaldo, and backed by the podestà, urged the city council in 1328 to decree that no one
should spill filthy water onto the road, an act “which may or can harm” (*noceat et nocere possit*) residents and passersby, under pain of 10 soldi.\textsuperscript{26}

The 1318 redaction also provides detailed instructions on keeping urban order and cleanliness, including how to dig canals between houses for leading rainwater and liquid waste (*stillicidia et aqua stillicidia*) away from local porticos. Failure to comply with these instructions would result in a fine of 5 soldi.\textsuperscript{27} Magistrates’ concern for the flow of water into and outside of the city received further attention in a statute from 1434, which defined what constituted sufficient maintenance of roads by those living along them: a road (*via*) will be considered ruined (*devastata*) when water meets an obstacle emanating from one’s property and consequently floods its surface.\textsuperscript{28} The clarification may have been especially timely, since a subsequent rubric describes *viarii* as “incompetent and slow in repairing and maintaining public roads” (*inertes et pigri ad faciendum reparari et manuteneri vias publicas*).\textsuperscript{29} If true, such allegations were very bad news. As the previous three chapters have firmly established, *viarii’s* role in promoting health and safety at the population level was crucial, an insight shared by numerous Piedmontese towns and cities too.

**Communal Health and the Monitoring of Infrastructures**

The earliest statute calling for the appointment of *viarii* goes on, almost as an aside, to designate the commune’s *camparii* or field masters as responsible for guarding public infrastructures.\textsuperscript{30} Normalizing this particular type of cooperation between the two outfits is at once remarkable and logical. It is remarkable in articulating their fusion in the context of a prescriptive source. Yet
in terms of a capacity to supervise public spaces and designate human, animal and other matter as being out of place, Pinerolo’s *camparii* were by then a common feature of polities throughout the region and a highly experienced one at that (see below). Indeed, for at least several decades the organ had been developing expertise in monitoring infrastructures in the commune’s direct hinterland and the city itself, protecting the movement of people, animals, water and produce moving along its roads and waterways and through its gates. When water ceased to flow, when matter moved in a dangerous direction or was being carried by the “wrong” people, the *camparii* were often there to raise or respond to a hue and cry.

We know this to be the case not only by surmising it from the commune’s statutes, but also from a unique series of registers preserved today at the town’s Archivio Storico. Interspersed among Pinerolo’s judicial acts up until the eighteenth century are six slim volumes documenting the organ’s daily activities and summary justice procedures for different semesters between 1292 and 1329, and in a manner not dissimilar to that of the *viarii* of Lucca and Bologna’s *fango* officials. Mostly legible, these records are a boon for studying town and country relations, especially in terms of animal husbandry and the management of fields, crops, roads, waterways and other infrastructures serving the commune’s intertwined biological, economic and political needs. Basic preventative policies and the vicissitudes of their enforcement are thus at the heart of these records.

Even without offering a complete statistical analysis of the field masters’ registers, it would be fair to say that the most common complaint they attest concerned animals “sine custodia,” that is loose ipgs or unsupervised beasts of
burden. The same concerns for safety underlying this category strongly resemble those behind monitoring practices we have already met in Lucca and Bologna (and countless instances in statutes issued by other cities), albeit mostly outside the city walls. In singles, pairs or packs, oxen, cows, horses, donkeys and pigs are recorded daily as having trespassed onto private lands, placing people, property and of course themselves at risk. To take the earliest extant evidence, on 13 June 1292 the camparius accused a certain Martino Vaniani of letting seven of his pigs enter the field of ser Ovalo Varasa.\(^{31}\) A week later the official came upon an ox belonging to the sons of the late Selvorio Cerderi in a field owned by ser Aymerio de Bagnolaro.\(^{32}\) And on 7 October that year no less than seventy cattle (\textit{lxx bestias boinas}) belonging to the brothers Jacopo, Bruno, Manfredo and Giovanni of Osasco were discovered out of place, that is, munching in another's field.\(^{33}\) To clarify: the issue underscored by the sources here and elsewhere is not merely trespassing (itself a source of disequilibrium), but the implication that, under lax supervision, animals could deplete food resources directly, destroy fences and water infrastructures and thus disrupt farming, and of course bring harm to themselves and other animals and humans and lead to neighbourly quarrels and even violence.

There is no shortage of similar violations and their attendant fines in later registers. For instance, on 7 May 1299 the camparius reported that, two days earlier, he discovered a cow and another animal belonging to Piero Conchetti in the oat field of Pepino Cardi. For some reason he only admonished Pepino's wife but later fined the couple 10 denari, which a marginal note suggests they soon paid.\(^{34}\) On 16 August 1323 Piero Sardini was fined 3 soldi after two of his pigs were discovered in another man's orchard.\(^{35}\) On 19 October 1325 a certain
Michele of Asti was fined the same amount for seven cattle gone astray. In late May 1329 Peyreto Orsellini allegedly allowed more than thirty of his sheep (xxx bestiarum lam[b]itarum et ultra) to invade the field of Giovanni Nasetto, in the outskirts of Pinerolo. And Margherita, a resident of Pinerolo, was cited on 20 February 1336, when four of her pigs ran into the field of a one Benvenuto. In these and numerous similar cases, a public official insinuated himself—successfully, it appears—into the space between two private parties and ostensibly on behalf of the community's greater good.

As already mentioned, animal trespassing (deliberate or unintentional, from their owners' perspective) not only undermined order by giving rise to human and animal violence, but also threatened the community's livelihood as beasts consumed or trampled crucial crops. The camparius accordingly ensured that both preventative aspects converging on his task were made explicit in the sources he generated. To offer only a handful of examples from different ledgers: on 19 September 1292, three pigs belonging to a certain Masso were caught eating grapes in another's vineyard. The donkey of Melano Cuccinelli struck down trees in the orchard of Vanno de Gilis on 31 April 1299. And on 8 February 1329 Pietro, son of Giovanni Symadi, was fined 6 denari to cover the damage (ad solvendum dampnum) inflicted by three of his loose pigs. Unsupervised animals could also harm public or unspecified property in town, as when seven pigs belonging to Vieto de Andreuccio were seen on 14 November 1329 causing damage (dampnum dantes) somewhere in Pinerolo proper. Even putting aside their actual impact on health and safety, and as brought to light by records of viaritii elsewhere, these registers document one aspect of a campaign to redefine a public sphere by showcasing the camparii as guardians of what were
by all accounts privately owned plots, but upon which public wellbeing purportedly relied.

If ensuring that local residents’ fields, gardens and vineyards remained safe and productive is easy to link to a community’s wellbeing, the same holds for another common complaint, namely theft of produce. People carrying suspect matter, especially firewood and fruit, thus make regular appearances in the camparii’s registers, perhaps the second most common charge they attest. Not infrequently, the culprits are women: Margesia, wife of Bertolino de Priori, for example, was caught stealing grapes in another’s vineyard on 20 August 1292. On 21 June that same year, Lantelma, wife of Maleno Cardoni, took grain from a field belonging to the sons of the late Bonario. On 13 November 1325 the camparius cited Jacometo de Sandri of Pinerolo’s upper borgo for cutting and carrying willow branches (incidentem et portantem perticas salicum) from another’s field. And on 25 September 1329, Margarita, wife of Renerdito, took a satchel of stolen grapes (unam tascatam uvarum...de suspecto) from the house of Guillelmo Grassi. It was in pursuit of such thieves, too, that the camparii worked near or even within Pinerolo’s walls. For instance, Griffone, a resident in Borgo Valenti near the Merdarello gate, was caught in 1292 on a public way near the castle gate (iuxta serrate castelli) carrying a large bag of hay, placing him and likely the field master within or else hard by the city walls. In these and similar cases government protection of private property may have helped ensure that produce brought to market was legitimate (also in terms of volume and weight) and made it difficult for individuals to sell fruits, vegetables, wine and grain whose origins and quality were obscure.
From the perspective of urban metabolism, perhaps the most evident type of dangers camparii sought to thwart were human behaviors that risked causing grave damage to neighbors, passersby and surrounding communities by changing the course of water through manipulating infrastructures. For instance, on 11 February 1299, the camparius recorded coming across a breached canal (unum sapellum disclausum) running through the orchard of Segnorino son of Piero. The redirected water drained into another’s cultivated plot, causing damage to the vicinity (insta leminiam per quod sepellum da[mp]num fuit vicinis). On 19 August 1323, the field master Piero detected water running off from a canal through a built diversion (clavigliam factam de lapidibus) leading towards another’s plot. A day later, Piero noticed another such extension (clussa) attached to a canal located outside a city gate (quamdam clussam factam in bealeriam...extra porta pontis) through which a great amount of water (magnam quantitatem aque) issued forth illicitly to provide for the field of Monte son of Agnessino. On 11 May 1325, the camparius found Giovanni son of Jacobino de Villario “making a clussa and placing rocks and blocs in order to siphon water from a canal belonging to”—and presumably watering the fields of—Jacobo de Ivrea (facientem cluxam et ponentem ibi lapides et metas et faciendo curssari aqua de beali Jacobi de Yporegia). And on 3 June 1329, the camparius encountered Giovanni Gherieri diverting water (capientem aquam) from a canal running through a field belonging to Jacobo de Pidis in order to water his own field (et de ipsa aqua aquantem quedam eius pratum). These and similar cases pursued by Pinerolo’s field masters routinely underscored the importance water infrastructures to the city’s provisioning. They thus also signaled to the community as a whole how important was the role played by this modest but
seemingly ubiquitous government organ in protecting everyone's livelihood in times of war and peace and well before Black Death began decimating local populations.⁵³

Fig. 4.2 Entries in a camparius register
As in Lucca and Bologna, so in Pinerolo, camparii registers recorded cases brought against those threatening the community’s safety and the integrity of local infrastructures. In this folio, accusations from mid to late July, 1292, are brought against owners of pigs, oxen and goats found roaming unsupervised, causing damage or threatening others’ property.

Source: Archivio Storico della Città di Pinerolo, Atti della curia, 1292 – Categoria XVII, Atti Giudiziarii 882, fol. 3r.

Image by the Archivio Storico di Pinerolo

By kind permission of the ministerio di beni culturali, Archivio Storico della Città di Pinerolo.

As we have had occasion to see, Pinerolo’s field masters did not operate exclusively beyond the city’s walls or disciplined only residents of the city’s hinterland. Furthermore, the continuity of misbehaviors and physical hazards between urban and rural settings meant that the camparii’s expertise in monitoring, assessing and repairing damages remained highly relevant across an otherwise visible divide, as did viarii’s. It was for this reason too that Lucca’s viarii and Bologna’s fango officials targeted people, produce and animals coming from the countryside and approaching urban domiciles, workshops and markets, as well as urban residents exiting the city gates to wash clothes, water animals, dry skins or dispose of waste, among other potentially polluting activities. Yet there was another sense in which healthscaping agents straddled an urban/rural divide, namely monitoring infrastructures, above all roads and waterways, which facilitated the removal of hazards, just as they did the arrival and quality of water and produce. As the next section will show, the type of expertise fields (and roads) masters developed remained crucial for supporting urban metabolism also within the city’s walls, since their physical remit encompassed
nodal points for diverse activities and infrastructures, all of which were under threat and in constant need of upkeep and repair.

Camparii’s expertise thus came in handy in helping viarri and other officers in carrying out their duties, at a time when Pinerolo was growing physically and demographically, and its rulers were bent on training ever more eyes on the streets to keep them clean, safe and reliable to use. Pinerolo’s non-camparii records are usually silent about the enforcing official who brought a violation to the court’s attention. Yet they do attest a certain bleeding of cases from one remit into another. In July 1292, for example, the court heard a complaint against Marcheto Bendoni, found damaging (dando dampnum) a forest that belonged to Beneguido of San Germano; against someone diverting water from a millrace; and against a certain Bruno, whose sows repeatedly (diversis modis et horis) entered into the garden of a certain Arnulfo. All but the latter at least must have taken place in the city’s hinterland, and their adjudication suggests that Pinerolo’s jurisdictional claims there resonated with some residents, thus further legitimizing the presence of camparii. The court also heard complaints about damage to sites such as walls and canals, infrastructures that often straddled the theoretical remits of viarri and camparii. Last but not least, they attest officials’ vigilance when it came to enforcing the quality of produce in the city, from wine to grain to meat, as when, on 17 May 1336, the court launched an inquest into the illicit resale of meat, charging a butcher and several vendors, including four women, with the offense; or when on 20 July that year a hefty sow appeared to have been illicitly killed and brought to the market.
Collectively, organs such as Pinerolo’s roads and especially fields masters served as an address for local residents to complain and promote individual and neighborhood agendas without having to make recourse to cumbersome and potentially expensive legal procedures. As such, they could help enforce government regulations on what constituted a safe distance from an oven for storing firewood; a prohibition on drying fresh skins under a portico or working them along the river, in millruns, near the Piazza San Donato or on any public way in the upper town; a proscription against allowing pigs on public ways; and a veto on washing clothes near wells or filling the latter with any filth.58 Seen from the vantage point of Pinerolo’s updated biopolitical agenda, it was a new and perhaps necessary expansion of the camparii’s traditional remit to ensure that no illicit matter (omnibus de suspecto) be carried or left by anyone, anywhere, day or night, within the commune’s boundaries.59

Compared to the viarri of Lucca, not to mention Bologna’s mud masters, Pinerolo’s camparii left modest records as regards rural (or rather, urban hinterland) policing. Moreover, what registers that did reach us lend themselves with somewhat greater difficulty to tracing connections that contemporaries may have drawn between the field masters’ tasks and the preservation of urban health, for instance by reducing miasmatic odors. Still, their examination spotlights the concatenations of objects (including agricultural plots), animals and people that combined to reify health and disease, safety and danger, and as such took part in defining when matter was out of place, when chaos invaded order, and by implication legitimized government interventions to restore an imagined equilibrium. Finally, these local linkages must also be seen in the context of the infrastructures on which they relied and which they helped
protect, extend and reproduce, from waterways and roads to market stalls and bakers’ ovens. It was the stability and safety of these infrastructures that began increasingly to define the health of a city.

Beyond Pinerolo

According to an eminent historian of Pinerolo and its region, camparii continued to serve as the “true and proper agents of the rural police” throughout Piedmont and into the modern era. And indeed, numerous sources help situate Pinerolo’s better-documented organ within a broader pattern of hinterland supervision, in which both viarii and camparii often played leading (if, to be sure, hardly exclusive) roles. For instance, a similar remit straddling the urban/rural divide was also given to the camparii of the hilltop town of Andrate in the early fifteenth century, as they were charged with “protecting and managing all goods of the said settlement” (custodire et gubernare omnia bona dicti poderii). In Bairo, some forty kilometers to the southwest, field masters had to “go to any place where properties belonging to the commune exist,” guard them day and night, and fine anyone who illicitly directed water onto a public way. Nearby Caluso defined its camparii’s main task as bringing to justice (accusare) anyone, human or beast, causing damage within the town’s boundaries, broadly defined. Back across the Orco River in Canischio, the camparius served as the designated official for addressing any damages made against the statutes (contra formam omnium Capitulorum Canischuli), and was the first person expected to repair the resulting damage. And in Caravino, the statutes allowed camparii to monitor all properties belonging to local residents, including fields, and charge people obstructing traffic on streets and roads. In none of these cases is it clear
whether the *camparii* were intended to render local *viarii* obsolete, but it is plausible that their activities as healthscaping agents were substantial. In Verolengo, by contrast, the two *camparii* appear to be synonymous with roads masters, and were thus held responsible for streets’ construction, repair and monitoring, and for bringing charges against any person or animal causing damage to them or acting on them in violation of the statutes.66

The cooperation, fusion or even occasional “viarification” of *camparii* may not be unique to Piedmont,67 but it is certainly better attested there than elsewhere in local statutes and documents of practice. This state of affairs may have to do with the scale of local settlements and their respective hinterlands. In larger urban centers such as Bologna, field and vineyard officials remained a separate entity well into the fourteenth century, distinguished on the one hand from the *fango* officers and on the other from the podestà’s regular policing staff.68 That said, the administrative compositions of large cities could have set up *viarii* in a manner that made separate rural supervision redundant. This seems to have been the case in Rome, for example, where the physical remit allocated to the building and street masters we encountered in the prologue extended throughout the city and formally stretched ten miles into the countryside.69 Either way, many of Piedmont’s more modest-size towns (once again, as compared with Emilia-Romagna, Tuscany and Lazio), chose to synergize the two, or indeed three, if we take into account the communal damage estimators, already discussed in relation to the *viarii* in chapter one.

The refocusing of field masters’ attention or at least their encouragement to extend the monitoring of roads and other activities into these infrastructures’ nodal points within towns’ walls, is politically significant. For it is suggestive of a
gradual shift in political economies from the countryside to the urban center even among smaller settlements, and the subordination of the former's state to the latter's agendas. Ample possibilities for mutual learning and the transmission of regional knowledge, for instance through podestà's entourages, did not necessarily translate into uniformity of practice. What is more, the maintenance of waterways and roads may have differed somewhat in practical terms on either side of the wall due to density and pressure on resources. On the other hand, cities such as Rome, which were not densely populated everywhere, preserved a certain *rus in urbe*, which meant that local roads officials had to attend to very similar needs as did *camparii* elsewhere. The same is likely true even in smaller cities, whose demographic decline following Black Death once again made room for agricultural activities within their walls.
Fig. 4.3 Camparii in Piedmont

Field masters were ubiquitous urban officials in Piedmont, often carrying out duties that in other regions fell to viarii or road masters.

Image by Alexis Rochat

Whatever their specific composition or remit, camparii outfits operated in further towns throughout Piedmont between the early thirteenth and early sixteenth century, including Aglié, Albiano, Alice Inferiore, Azeglio, Barbania, Borgo Franco, Brosso, Chiaverano, Chivasso, Lessolo, Oglianico, Ozenga and Strambino, to offer only a partial list. Some of these were small towns and rural strongholds, like some of the settlements dealt with in chapter one. And while a town's size should certainly be considered an
important parameter in studying its preventative health history, both the prophylactic principles and the biopolitical agendas being pursued were not categorically different. Without arguing as yet for these organs’ direct biological impact on the urban environment and its hinterland, their documented activities further expand the view offered by Irma Naso’s seminal work on Piedmont’s medical infrastructure for the later Middle Ages. There is no reason, here as elsewhere, to limit ourselves to curative and modern-sounding offices such as public physicians, hospitals and health boards in reconstructing how prophylactic strategies were designed and pursued.

Recognizing these officials’ healthscaping roles also challenges the entrenched view, already discussed in the introduction to this book, of medieval urban communities scrambling for solutions and devising ad hoc preventative measures only in the devastating aftermath of Black Death. Certainly Piedmont, like the rest of Italy and Europe, experienced a drastic demographic decline in the second half of the fourteenth century. But as we have repeatedly seen, it is unnecessary to rely on legislation concerning plague-prevention as the sole indicator of prophylactic awareness and action. All of the camparii’s registers from Pinerolo, for instance, predate the onset of plague; indeed, their activities are recorded decades before the office’s first mention in the statutes of 1318. Field masters’ policing techniques, designed for the hinterland but easily applied to an urban setting, meant that harm-reductive approaches and other healthscaping insights were common tools in the hands of urban governments and residents well before Black Death struck.

Conclusion
This chapter has taken us a small but decisive step further in establishing the deeper background and piecemeal development of healthscaping practices in urban Italy, by illuminating their rural roots and remit. It argued that human, animal and environmental dangers threatening hinterland infrastructures—fields, fences, roads and waterways—fell under the disciplining gaze of local governments as part of their campaign to promote urban order, health and safety. Ongoing practices in the urban hinterland, which were initially relevant above all to rural environments and dwellers, began to inform and integrate with urban policing routines and shape the responsibilities of pertinent officers, including but not limited to viarii and camparii. The observation regarding urbanization’s reliance on the countryside in general and on rural administrative techniques in particular is hardly new. But the specific meshing of these routines, including construction, supervision, record-making, prosecution and punishment aimed at benefitting urban wellbeing, expands the scope of studying healthscaping beyond the city walls to include urban territories in general. That urban governments and residents were aware of this, as this chapter in particular argues, helps situate some later developments, including the patrol of city-states’ territorial boundaries during bouts of plague and the requirement from passing people, animals and produce to be accompanied by a clean bill of health. It seems fitting to stop here, where we can safely release healthscaping from its urban cage and turn our attention to other insights and practices that not only link cities and the countryside even further, but also take the story of medieval healthscaping beyond the Italian peninsula, across Europe and into the premodern world at large.
Chapter Five

Healthscaping in Medieval Europe and the Premodern World

For nearly a century, historians of medieval Europe have been studying various aspects of premodern healthscaping, especially in an urban context: actions meant to promote health and fight disease at the population level, including the design of physical, legal and executive infrastructures akin to those discussed in the previous chapters. With the notable and recent exception of later medieval England, however, broad regional studies (roughly paralleling modern countries or major linguistic groups) remain a desideratum. This state of affairs not only reduces the field’s visibility, but also hampers transregional comparative work. Filling both gaps is therefore essential for establishing the scope of medieval European healthscaping, which would in turn help interrogate a common understanding of Euro-American modernity from a public health perspective. It could for instance put claims of Italian (or English) exceptionalism to the test and, by comparing western European ideas and practices with those of other early civilizations, it could trace change and continuity in preventative healthcare still farther afield. The present and final chapter is an attempt to begin doing so by bringing the Italian case studies and group profile sketched so far into conversation with the findings of more and less recent scholars with different geographical foci. As such, it builds on the insights of a growing literature to argue that, in many ways, healthscaping was common in the premodern world.

Neither medieval European civilizations nor their neighbors and far-flung contemporaries made up a homogenous cultural entity sharing a cohesive health
literacy. And even if a common grammar can somehow be postulated, these regions still differed widely in terms of ecology, political organization, social structure, religious and cultural values, and the financial and bureaucratic means at their disposal to promote health and fight disease at the population level. The working assumption of this book, however, has been that individuals, organizations, societies and regimes across the Italian peninsula perceived health—however they defined it—as a sine qua non of the good life and thus integrated it into the myriad political imaginations and social practices designed to pursue and secure that life.

In a certain sense, it would seem absurd to deny the presence of this type of biopower brokering in any society with a modicum of organizational complexity. For while it is imaginable that societies existed which prioritized leading nasty, brutish and short lives as a goal in and of itself, they are not ample in the historical record. Even according to Thomas Hobbes, it was perpetual fear of such conditions that drove humans to leave behind the so-called state of nature and paved the way to forming collectivities, of which cities are but one albeit prominent example. In other words, health, safety and wellbeing are at the very least key discourses used in the de/legitimization of social and political orders on both sides of an alleged pre/modern divide. Yet it is precisely this indeterminacy that many historians have either ignored or flatly denied, by relegating the period before c. 1750 to (at best) a prehistory of the public health movement in Europe, and by insisting that the latter was a key accouterment of modernity: hard to conceive and impossible to realize in the absence of advanced science and technology, secularism, representative governments and centralized bureaucracies. It is a state of affairs that not coincidentally describes numerous
civilizations outside Euro-America in the nineteenth, twentieth and twenty-first centuries as well.

Challenging this entrenched view from a still broader perspective, the present chapter relies progressively on the conclusions of health historians working across Europe, Asia, Africa and the Americas. It begins to move beyond the foregone case studies, however, by taking a second look at the peninsular picture through the lens of several further prophylactic traditions predating and informing the area's late-medieval urbanization. Alongside medical theory and advice literature, different Greco-Roman insights, I argue, have variously shaped Europe's urbanism and biopower brokering, including staple preventative measures. Subsequent sections will situate Italian practices within western Europe and vis-à-vis its direct neighbors, East Rome (Byzantium) and the Mediterranean Islamicate World, before briefly glancing at some documented interventions across the premodern globe. The geographical iter this chapter follows is emphatically not meant to be exhaustive, let alone imply either chronological precedence or a higher degree of “accomplishment” for Italy or western Europe. Nor, to repeat, does it seek to flatten the landscape of public health history synchronically or, for that matter, diachronically. Rather, it aims concisely to survey, from a reconstructed historical and emic vantage point, the culturally specific ways in which some premodern societies defined and addressed health threats at the community level, an endeavor that existing health histories tend to play down or even ignore for reasons touched upon in the introduction to this book and further explored in this chapter's conclusion.

The Peninsular Vista Revisited
Like many former provinces of the western Roman Empire, Italy too experienced a process of political involution throughout the early and central Middle Ages.\(^5\) During these centuries, however, and subsequently with urbanization, it continued to share learned traditions, physical infrastructures and civic and religious practices inherited from Rome or purportedly inspired by its example.\(^6\) Lucca and Bologna, for instance, bear a strong imprint of Roman ideas about and practices of keeping residents safe and in good health, notwithstanding their Etruscan and Celtic heritage. (The valley in which Pinerolo, our third case study, was situated, was inhabited by Celts, although the city itself was probably a Lombard foundation).\(^7\) In this they fit a broader regional profile that owes much to the Romans’ accumulated capacity to safeguard communal health, not least thanks to their expansive civic and military apparatus.\(^8\) Canals, roads, gates, bridges, drains, sewers, storehouses, protective walls and other constituents of the ancient urban fabric are widely attested in textual sources and through their material survival; and many of these vestiges, though often neglected, abandoned or appropriated throughout the early and central Middle Ages, continued to promote or at least enable programs and anti-programs (or strategies and tactics), to improve health and fight disease at the population level.

Italian cities’ location and physical composition, therefore, as well as their inhabitants’ conduct at least in the public sphere, continued to reflect some ancient preventative insights.\(^9\) This book’s opening anecdote concerned a typical peninsular organ operating in Rome from at least 1227 and which promoted a communal hygiene very much defined by an older physical matrix and natural-philosophical paradigm. In the late twelfth century, to take a slightly earlier
example, Roman pontiffs began to express concerns about the city’s salubriousness, especially during the summer months, and accordingly spent much of that season (and occasionally others) away from Rome, in places considered healthier, such as the hilltop towns of Anagni, Perugia and Viterbo. Furthermore, as Agostino Paravicini Bagliani has shown, papal courts consciously applied a range of prophylactic principles to their host cities as a way to intervene against what they saw as local health hazards, basing themselves on ancient medical insights recently recovered through Arabic science and transmitted by Salerno-trained physicians.

The example of the papal curia is compelling, also thanks to its perceived reliance on learned traditions and its impact on the healthscape of several cities. However, as this chapter argues, well beyond and preceeding the nascent Papal State, prophylactic knowledge circulated in Italy through various and by now well-documented channels, in monasteries, armies and courts, and informed decisions made by different experts and communities. Without entering into the minutiae of these ideas’ transmission in each context, it seems that urban healthscaping in the period this book has focused on did not hinge on a specific revival of Galenic and Hippocratic medicine, although the latter certainly would not have hindered such efforts. To demonstrate continuity, the present section briefly examines three arenas of applied prophylactics, namely civic architecture, military engineering and cenobitic monasticism, and spotlights their mostly unsung contribution (certainly as compared with medical theory and curative practices) to urban preventative interventions, including the later framing of viarii’s roles. Later sections will touch upon this knowledge cluster’s relevance for exploring public health beyond the peninsula as well.
In his *Ten Books on Architecture*, Roman civic and military engineer Vitruvius (70/80-15 BCE) explained that a paramount concern in determining a settlement’s location is its health (*salubritas*). As he put it, ostensibly to Emperor Augustus, a central plank of health are the qualities of airs and waters to which residents are exposed. The accomplished architect was accordingly to be “not unlearned in medical matters” (*medicinae non sit ignarus*), for without applying its insights “no dwelling can be regarded as healthy.” The concept of health Vitruvius invoked was multilayered and situational, drawing as it did on the architect’s ability to address existing climactic challenges through artificial solutions as well, solutions which moreover had to adapt to the physical make-up of local populations. As he pithily put it, “what nature would harm, art shall heal,” or rather, given the preventative nature of his blueprint, help mitigate or ideally obviate.

Architecture’s capacity for promoting positive health outcomes was hence deemed substantial in antiquity, so long as its is adapted to intertwined and shifting variables of man and weather across regions. From a medical-humoral point of view, climate and ethnicity rendered local populations susceptible to certain imbalances, especially through over-exposure to heat and wind. To counter their effects, urban planners had to orient cities with respect to the sun, according to their position on a north-south axis and with due consideration to topographical parameters such as altitude, vicinity to bodies of water and the latter’s quality. With all this in mind, the healthiest site for a city to Vitruvius’ mind would be:
[H]igh and free from clouds and hoar frost, with an aspect neither hot nor cold but temperate. Besides, in this way a marshy neighborhood shall be avoided. For when the morning breezes come with the rising sun to a town, and clouds rising from these shall be conjoined, and with their blast, shall sprinkle on the bodies of the inhabitants the poisoned breaths of marsh animals, they will make the site pestilential.17

The instructions were clear if hardly original. Beyond relying on well-known Hippocratic principles, the passage likely borrows directly from a near-contemporary text, namely De re rustica, written by Varro (116–27 BCE). While Varro focused on rural estates rather than on cities, the advice he dispensed is grounded in similar prophylactic theory. As Scrofa, one of the treatise's interlocutors, states:

In locating a farm, special care should be taken to place it at the bottom of a wooded hill, where there are broad pastures, so it will be exposed to the healthiest winds that blow in the region. A farm facing the east is best situated since it has shade in the summer and sun in the winter. If you are forced to build on the bank of a river, be careful not to let the farm face it, as it will be extremely cold in the winter and unwholesome in summer. Precautions must also be taken in the neighborhood of swamps, both for the reasons given, and because there are bred certain minute creatures which cannot be seen by the eyes, which float in the air and enter the body through the mouth and nose and there cause serious diseases....

See that the farm does not face in the direction from which the
infected wind usually comes, and do not build in a hollow, but rather on elevated ground, as a well-ventilated place is more easily cleared if anything obnoxious is brought in. Furthermore, being exposed to the sun during the whole day, it is more wholesome, as any tiny animals that are bred nearby and brought in are either blown away or quickly die from the lack of humidity. Sudden rains and swollen streams are dangerous to those who have their buildings in low-lying depressions, as are also the sudden raids of robber bands, who can more easily take advantage of those who are off their guard. Against both these dangers the more elevated situations are safer.18

Vitruvius surmised that Varro’s ideas were applicable to an urban setting as well, where health and wellbeing were arguably of even greater concern and shaped by similar factors, including human behaviors and general conditions.

Building on these insights to envision a healthy city, Vitruvius accordingly argued that a town’s specific orientation within a given geographical location is crucial since, through vacilations between heat and cold, “bodies which are in these places will be infected.”19 And the same holds for non-human bodies and matters as well:

For in wine stores no one takes light from the south or west but from the north, because that quarter at no time admits changes, but is continuously fixed and unchangeable. So also those granaries which look towards the sun’s course quickly change their goodness; and fish and fruit which are
not placed in that quarter which is turned away from the sun's course do not keep long.\textsuperscript{20}

The built environment was crucial to human health, then, not only in terms of its layout, but also in its material constitution and internal arrangement. Accordingly, “in laying out walls we must beware of those regions which by their heat can diffuse vapours over human bodies,” for it is “also from the chilling moisture of winds and breezes, [that] vices are infused into bodies.”\textsuperscript{21} In sum, “it is necessary to inquire diligently, so we may select the most temperate regions of the sky, where health (salubritas) is to be sought in laying out the city walls.”\textsuperscript{22}

Varro’s and Vitruvius’ notions of salubritas, relying in turn on Hippocrates, are also echoed in two influential military treatises from late Antiquity, namely Onasander’s Strategikos (first century) and Vegetius’ De re militari (late fourth or early fifth century). The view of armies as repositories of knowledge about public health is often obscured by a tendency to see them as organizations mobilized towards death and destruction rather than vulnerable entities designed to ensure life and sustenance.\textsuperscript{23} For Roman military life, much like cenobitic monasticism (see below), entailed a regular confrontation with community-broad threats, be it during training, at times of peace, at war or in the immediate aftermath of battle. As Onasander warned the aspiring Roman general (his treatise was formally dedicated to Quintus Veranius Nepos [d. 57], the future governor of Britain), the safe encampment requires more than palisades, a ditch and vigilant guards. Indeed, a paramount concern is to identify a location:
[T]hat is not marshy, nor damp; for such places by their rising vapours and rank smell bring disease and infection to the army, and both impair the health of many and kill many, so that the soldiers are left few in number and weakened in strength.²⁴

Polluted air and water, malnutrition and rampant disease were as lethal to soldiers as and often more than any enemy they faced on the battlefield, which meant that armies and cities across the pre/modern divide shared much in this respect, too.²⁵ Evoking this parallelism, Vegetius sought to extrapolate preventative principles from an urban context, comparing the entrenched camp to “a walled city which they [i.e. soldiers] can carry with them anywhere” (quasi muratam ciuitatem uideantur secum ubique portare). Hence, a general's choice of site must be informed by similar considerations of human and non-human factors to those defining a city's resilience:

Their situation should be strong by nature, and there should be plenty of wood, forage and water. If the army is to continue in it any considerable time, attention must be had to the salubriousness of the place. The camp must not be commanded by any higher grounds from whence it might be insulted or annoyed by the enemy, nor must the location be liable to floods which would expose the army to great danger. The dimensions of the camps must be determined by the number of troops and quantity of baggage, so that a large army may have room enough, and that a small one may not be obliged to extend itself beyond its proper ground.²⁶
As with cities, so with military camps, both topographical and human-relational aspects define a site’s health. Yet the choice of an ostensibly promising location had to be reinforced by encouraging healthy habits as well. Here too Vegetius offers a complex assessment befitting a dynamic situation. For the health of troops:

[D]epends on the choice of situation and water, on the season of the year, medicine and exercise. As to the situation, the army should never continue in the neighborhood of unwholesome marshes any length of time, or on dry plains or eminences without some sort of shade or shelter. In the summer, the troops should never encamp without tents. And their marches, in that season of the year when the heat is excessive, should begin by break of day so that they may arrive at the place of destination in good time. Otherwise they will contract diseases from the heat of the weather and the fatigue of the march. In severe winter they should never march in the night in frost and snow, or be exposed to want of wood or clothes. A soldier, starved with cold, can neither be healthy nor fit for service. The water must be wholesome and not marshy. Bad water is a kind of poison and the cause of epidemic distempers.

Climactic, physical as well as human factors thus helped define the health of a community, be it in on the march, in a farmstead or behind a city’s walls. According to the influential paradigm inherited, shared and promoted by these authors and their numerous commentators and translators, the same group of elements known in the period’s medical literature as the six “non-naturals”
converged to increase or reduce the health risks attendant upon populations, in and outside the context of epidemic disease, war and famine. The influence of these authors’ specific ideas on population-level preventative healthcare remains mostly uncharted. Yet it is clear that their authority remained substantial with urbanization and the rise of university education throughout the European Middle Ages and Renaissance. As such, this tradition offers an important alternative to the intensification of formal medical studies in the twelfth century as an exclusive vector for the transmission of prophylactic ideas and social practices.

A third and final prophylactic tradition, with similarly deep roots in Italy, is the common or cenobitic monastic life, as distinct from solitary or eremitic monasticism. Monks’ and nuns’ asceticism and their rejection of earthly concerns may logically entail a high degree of apathy to death and disease. After all, why promote anything that might reduce penitential suffering on earth or delay one’s ascent into heaven? Yet even to Christianity’s foremost spiritual athletes, a gateway to paradise could also be imaged, founded and run as a sustainable settlement, with attendant routines for keeping communities at arm’s length from the brink of death. According to Benedict of Nursia (c. 480-543), for instance, writing to his brethren across the Italian peninsula, cloisters “should be planned, if possible, with all the necessities—water, mill, [herb or vegetable] garden, workshops—within the walls.” The instruction was part of a text that would come to be known as the Rule of St. Benedict, which served throughout the Middle Ages and until this day as the most influential blueprint for Catholic monastic life. It promoted a self-sufficiency that, while couched in terms of the
spiritual benefits of staying put (*stabilitas loci*), was also advantageous from a biological standpoint, especially in light of its advocacy of physical moderation.  

For, barring punishment for monks’ misbehavior, the *Rule* decrees “nothing harsh, nothing oppressive” (*nihil asperum, nihil grave*) as part of the convent’s routine, and encouraged the brethren to imitate Christ’s passion “through patience” (*per patientiam*), in conscious juxtaposition with a rush towards martyrdom.  

Hygiene and adequate diets, including warm dishes and a stable supply of bread and wine, ensured the long wait was bearable, with clear instructions, for instance, on how to clean cooking and eating utensils. The same care for the morrow was to be taken regarding the isolation of sick brethren, for whom bathing would be permitted “as often as necessary” (*quotiens expedit*), as would the consumption of otherwise forbidden meat “in order to recuperate” (*pro reparatione*). These amenities, along with a mild labor regime, ample time for prayer, reading and contemplation, and the provision of clothes suitable for local climates and in accordance with personal needs, were clearly meant to offer cloistered inmates with reasonable life chances, not rush them towards Heaven.  

Although the history of Christian monasticism is rife with examples of extreme self-abnegation and longing calls for a harsh desert life, communities’ relative wealth, stable diets, token physical labor and protection from violence by local elites, were likely the rule rather than the exception. Add to that monks’ near monopoly, for the better part of a millennium, on formal natural-scientific knowledge and their growing expertise with running sick wards for themselves, high-caliber guests and the surrounding area’s residents, and the emerging picture situates them at the very pinnacle of healthy communal life, towering
above armies and even royal and episcopal courts, not to mention communities of peasants. It was a position they were to occupy throughout the Middle Ages, often to their contemporaries’ chagrin, as the Benedictine Rule’s bio-norms continued to exert a powerful influence on European monasticism in and beyond Italy. Indeed, later reformers often decried communities’ departure from the spirit and letter of this text, which usually meant that the brethren have become more lax rather than too strict about its mild prescripts.

Cistercian monasticism is a well-known case in point. This highly popular reform movement emerged in the late eleventh century as a deliberate effort to restore Benedictine values and practices, construed as long-abandoned by Cluniac monks. Cistercians’ efforts focused on clearing Europe’s woodlands and striving for a self-sufficiency that is not to be confused with subsistence living. As two recent scholars have argued, the White Monks’ rhetorical appeal to the desert of old provided the movement with key “spiritual and ascetic co-ordinates” as well as a logistical and administrative challenge. Yet settling that desert was envisaged more as a heroic process of claiming new (and sometimes already cultivated) land, rather than embarking upon a collective mission of physical self-destruction. If so, their mission may have involved a creative tension between pre- and postlapsarian life.

The order’s keynote foundation at Clairvaux, for instance, was lovingly and triumphantly described by one twelfth-century monk as a walled enclosure spread over two hillsides, “one rich with vineyards, the other fertile with crops; pleasing to view, it ably serves our needs.” The brethren’s labor, moreover, is dubbed as joyful and peaceful, and the anonymous author speaks with genuine enthusiasm about how much easier their work had become by harnessing the
River Aube’s stream to power the monastery’s industries, which included a tannery and several mills. An orchard and garden occupied grounds next to the infirmary, affording “no small solace to the brothers in their sickness,” a shelter shading them from the day’s heat and filled with the sweet chirping of birds. In this desert oasis:

“[T]o cure one’s illness divine piety provides many remedies: the sky smiles with bright serenity, the earth exudes wealth, and the sick person drinks in, with eyes, ears and nostrils, the delights of color, song and scent.”

In flaunting Clairvaux’s salubriousness, the text appeals to both natural traits and artificial measures designed to fend off pollution and disease. Alongside a stable supply of food, access to medical care and surroundings that please three key senses, the water siphoned off from the river mitigates the hardships of the men’s toils and “carries away waste and leaves everything clean behind it.”

Further engineering feats, safeguarding the cloister’s metabolism, include a brook that “keeps the water-level constant by means of feeder ditches, which carry and regulate both inflow and outflow,” and a “small but pretty hut” designed to enclose a major spring “and protect it from any dirt.”

Harking back to the Benedictine ethos of autarky, this technologically advanced community served as a model for hundreds of daughter-houses and affiliates, including its namesakes (though situated on a plain) Chiaravalle Milanese (founded 1135), Chiaravalle della Colomba near Piacenza (1136), Chiaravalle di Castagnola in Ancona (1147) and many others throughout the Italian peninsula. As their
location already implies, these communities’ impact was never limited to the remote countryside, for they helped perpetuate a nexus of preventative insights and practices that would service Europe’s rapidly developing urban centers.

Fig 5.1 Chiaravalle Milanese (founded 1135)

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Several reasons account for Italian (and European) urbanization’s strong ties with monasticism, which until then was largely a rural phenomenon. First, monks and nuns serviced and relied upon rural and urban communities alike and thus had to be sufficiently close to either type of settlement.⁴³ (The same, not coincidentally, can be said of armies over this long period). Next, as cities
proliferated and expanded, they often absorbed adjacent cloisters or even grew out of existing convents, as the latter’s service industries began to seek new markets.44 Last but not least, uniquely urban forms of religious life, from the
Humiliati and the mendicant orders originating in southern Europe to the beguines and the Devotio moderna emerging in the north, sprung into life from the twelfth century onwards, responding to and shaping many walks of urban life, also through daily contact between religious men and women and secular city dwellers.45 Alien or native to these changing surroundings, monastic communities continued to draw upon their age-old standards and longstanding traditions to translate public-hygienic practices through architecture, social mores and prophylactic-medical knowledge.46 As preachers, confessors, educators, art commissioners, builders and administrators, they served as one among several key examples for Italy’s fledgling urban governments and civic society.47

From Antiquity to the later Middle Ages, then, architects, civic and military engineers, soldiers and monks continued to develop prophylactic insights, all of which are worth considering as we begin to trace the broader contours of premodern healthscaping. Yet their impact is evident even when restricted to the specific subject matter of the previous chapters, namely streets, roads and other urban infrastructures. If Vitruvius, like Varro, Vegetius, Benedict and others, understood the health of a settlement in terms of its location, orientation, access to food and reinforcing behaviors, he also related it specifically to the layout of roads and waterways. Indeed, the importance of the latter’s situation and upkeep for a community’s wellbeing is explicitly set above that of erecting defensive walls and towers.48 Underscoring the potential damage
of winds, for instance, Vitruvius authored an entire chapter (I, vi) on how to reduce their threat by arranging streets and walls so as to capture them in over-ground tunnels. And lest the health impact of such interventions be lost on his audience, he stressed that allowing winds to blow freely within the city was no mere inconvenience, for “if they are cold, they injure, if warm, they corrupt, if humid, they gravely harm.”49 Certainly, even the most gifted urban planner could not be expected to avoid winds entirely, but recognizing their threat, he must strive to manipulate them, also by laying out streets, quarters and walls and situate them in ways that would head off a harmful onrush.

Whether or not urban planners heeded Vitruvius’ specific advice on this matter remains to be seen, although for once archaeological evidence and other records of practice may allow us to trace correlations between local wind traffic or its perception, the layout of urban grids and the situation of walls and gates. While an examination of the relevant data lies beyond the scope of the present study, the theoretical underpinnings of urban planning illustrate how the sustainability of certain infrastructures was perceived as directly impacting population health in premodernity. The camparii, viarii and fango officials featured in the previous chapters were thus also heirs to a nexus of preventative insights that, inter alia, dealt with the layout, location and use of streets to keep local populations safe and sound. Nor were they unique within the peninsular landscape. As chapter one in particular stressed, water-, roads- and other public works officials in their different local constellations were ubiquitous at least from the thirteenth century onwards, and notwithstanding the variety of responsibilities they assumed (itself a remit in flux), they were frequently and
explicitly associated with promoting health and fighting disease at the communal level.

It is not this study's intention to establish whether these officials were in fact successful at improving health outcomes, certainly not by modern biological and epidemiological standards. Nor was attaining that goal exclusively theirs, as I have repeatedly stressed, since health concerns in cities abounded and urban governments, organizations and individuals mustered different resources to fight them, including the safe disposal of domestic and artisanal waste, the appointment of communal doctors, the periodic exiling of sex workers and the foundation of institutions to define and sequester social marginals considered threats to the community. Whatever their methods, officials' explicit concerns and goals were thus part of a broadly coordinated strategy, and understandably so. Well before Black Death, Italian towns enjoyed an ambiguous reputation for health, as evidenced by the insistence to the contrary in civic propaganda (Laudes civitatum); gestures at sustainability in upbeat hydronyms (Aquaviva in Molise, Aquasanta in the Marche); evocations of beauty and wellbeing in place-names such as Bellino (Piedmont), Belluno (Veneto), Benestare (Calabria) and Piacenza (Emilia Romagna); and allusions to fecundity in names such as Ferrara (Emilia Romagna), Pero and Oliva (Lombardy), Noci (Apulia) and of course Florence (Tuscany).

On a side note, the latter impetus underscores a modern (or indeed, late medieval) bias regarding swamps as unhealthy places. It is possible, for instance, that communities either accepted or chose to capture their own precariousness and resilience in (re)naming their settlements after threats they regularly faced or calamities they endured. But it is also plausible that ancient
settlements such as Rapallo on the Ligurian coast, which encapsulates its earlier designation as a swamp (*palus; palude*), and Lucca, whose name may derive from the Celtic *luk* or swampy place, reference an original affirmation of swamps as productive environments. Either way, there is ample evidence about how communities took stock of the spiritual and environmental challenges they had to cope with, and what resources they mustered in doing so, however limited they may seem from a modern perspective. Among these resources, preventative insights gained not only by medical scholars, but also those developed and transmitted by military and monastic traditions, hold pride of place, and will continue to do so as we begin surveying healthscaping practices farther afield.

**Beyond Italy: Western Europe, North and South**

Diligence and sophistication, not apathy and stasis, characterize the efforts of many governments, religious organizations, medical professionals and laypeople across medieval Europe to define and serve their communities’ health needs. In illuminating these efforts medical historians of the Middle Ages have tended to focus on curative approaches, stemming as this tradition does from intellectual history and the history of science and technology, subfields that often emphasize theoretical constructs and clinical achievements over more pedestrian, preventative routines. Yet significant contributions from urban, administrative, political, legal, literary and social historians, not to mention the variety of archaeology, were already visible at an early stage, and these were soon augmented by scholarship on economic, gender and environmental history, and incorporating methodological insights from still more fields. The introduction to this book tried to explain why, despite its high quality and solidifying claims, the
combined result has yet to fundamentally alter the prevalent narrative of public health history, and thereby interrogate an entrenched paradigm of Euro-American modernity, the alleged cradle of biopower, governmentality and the public sphere. Subsequent chapters sought to draw a number of methodological and conceptual bridges to advance debates among scholars working across the present construct of a pre/ modern divide. But even if the proposed approach fails to tempt scholars to rethink the perceived chasm between industrialization and the previous urban landscape from the perspective of communal prophylactics, perhaps some of my past and present colleagues’ empirical findings will.

The remainder of this chapter accordingly situates some of this book’s tentative conclusions within the broader field’s combined perspective, beginning with the present section. Premodern health studies offer as yet neither full nor equal coverage of western Europe, a state of affairs that only loosely relates to the survival of sources, since it also reflects the type of questions being asked locally, that is to say within the boundaries of modern national and linguistic traditions. Given the relative wealth of local repositories in Germany and the Baltic basin, for instance, we may expect to become far more knowledgeable about the region’s medieval prophylactics in due time and given adequate attention, especially to Imperial and Hanseatic towns. By contrast, the same may not apply across the remainder of Scandinavia, central Europe and much of the Balkans, regions that were generally far less urbanized and whose written records prior to the sixteenth century are comparatively scarce. On the other hand, questions about local healthscaping practices, and perhaps even their
impact, are precisely what civic-, bio- and zooarchaeologists working in these regions are better equipped to address.  

At any rate, ample evidence already brought to light from the British Isles, Iberia, France and the Low Countries in particular allows us to begin tracing premodern European practices, especially after these sub-regions’ intensive urbanization in the later Middle Ages. The specific chronology certainly differs among these regions, as did responses to Black Death and the particular resources allocated to monitoring waste, pollution and human and animal behaviors considered dangerous. The seesawing between centrifugal and centralizing tendencies, which we observed on a meso- or micro scale in Italy earlier on, is also visible elsewhere, for instance as a reflection of the shifting balance of power between royal government and urban jurisdictions. The parallelism is likely valid (though as yet unproven) with respect to the degree of cooperation that preventative measures have won across space and time. In surveying the available studies, therefore, the emphasis will not be on uniformity but rather on coherence.

Among programs designed to insinuate medieval governments into the process of biopower brokering few are as familiar to public health historians as London’s assize of Nuisance and its local parallels in neighborhoods and towns across England. While no royal or municipal organ in the Isles seems to have been designed uniquely to pursue environmental offenders, these court sessions present a parallel to the summary justice procedures led by Italian viariri and their notaries. Here, plaintiffs could approach the court to complain about damages caused to them, neighbors and passersby through neglect or malice, and which manifested in dilapidated walls, clogged drains, exposed sewers and
so forth. In contrast to Italian city dwellers, however, these plaintiffs represented themselves rather than the community as a whole, and in order to make their voices heard they had to press charges rather than rely upon an ex officio inquest by an urban or crown official. As Carole Rawcliffe has demonstrated, however, residents’ accusations could on occasion precipitate inquisitorial procedures, and municipal governments certainly used them to increase the visibility and legitimacy of top-down interventions.60

Dovetailing with Rawcliffe’s conclusions regarding the later Middle Ages, Leona Skelton has recently shown how English and Scottish towns in the sixteenth and seventeenth centuries mobilized modest resources to detect hazards, such as newly infected members of the community during bouts of plague. In this she echoes an observation made by Dolly Jørgensen in her study of Coventry and Norwich from 1400 to 1600, namely that the period witnessed a process of spatialization, that is a “transition from a top-heavy medieval structure that put sanitation in the hands of the highest civic authorities, to a dispersed model of responsibility with involvement at site-specific, local levels.”61 According to Skelton, however, no single approach seems to have prevailed when it came to monitoring urban hygiene at the time: some cities held on to decentralized “forefront systems,” by which households took responsibility for their length of a street (as was common in Italy too), while others pursued a centralized, municipally run “scavenger system,” with salaried employees or officials who were allowed to charge for their services.62 Streets, at any rate, appear to have by then (if not well beforehand) attracted magistrates’ attention as major at-risk sites, whose monitoring was explicitly linked to “the better preventing of sickness & diseases.”63
Skelton, along with Richelle Munkhoff, has also shed important new light on the otherwise elusive role of women in promoting public health programs, for instance by documenting poor widows who served as a municipality’s ears and noses on the ground in their capacity as aides to ailing members of the community. These women’s employment was in itself a form of institutional charity, albeit one that allowed them to report back on the spread of disease, leading to the removal or segregation of newly identified victims. Here as in Italy, women developed different types of expertise that shaped prophylactic routines as well, be it as midwives, housewives, innkeepers, cooks, gardeners, artisans or greengrocers; and they were conversely held to account for undermining preventative norms. But both types of routine were seen as part of women’s general civic duty rather than reflecting an official or legitimate semi-professional role in the public sphere.

There were other ways in which English royal and municipal government as well as guilds and individuals sought to promote health and fight disease. Market regulation, including product quality and general cleanliness; waste disposal practices; the provision of clean and sufficient water; the installation of public latrines; the foundation of hospitals and leprosaria; the recruitment and regulation of physicians and other medical staff; charitable aid to the poor; and of course the monitoring of people and activities considered polluting and/or sinful—all are attested to a considerable degree across the region well before the Industrial Revolution and the alleged birth of the public health movement. These and other interventions have by now been well documented, defying—so far mostly in theory—an image of premodern cities as unhygienic death traps forged for posterity by a Victorian imagination.
Curative medicine for the masses in Iberia, as Michael McVaugh, Luis García Ballester, Jon Arrizabalaga and others have shown, began well before the plague. The same observation holds true for prophylactic medicine at the population level. For most of Iberia, home to some of Europe’s largest cities at the time, key healthscaping practices were developed and introduced during the peninsula’s Islamic period, to be discussed below. Yet the later Middle Ages witnessed both important continuations of that tradition (for instance, as muhtasibs transformed into mostassafs) and innovations upon it, some of which offer rich parallels to the Italian case studies. Perhaps most striking is the appointment, in later fourteenth-century Saragossa, of a veedor de carreras, términos y puentes, an office later combined with a walls inspector as the office of the veedor de muros y carreras. As in Italy, here too this modest outfit, comprising an officer and an aide, was tasked with maintaining the quality of key urban infrastructures and ensuring the safety of those utilizing them, including through fighting waste and water blockage, commonly seen as causes of air and water pollution. The officers’ remit concerning preventative healthcare was far from complete, but it is clear that carrying out their task was perceived (or at least construed by officialdom) as having direct and indirect implications for residents’ health.

Certainly, the urban amenities falling under the veedor’s jurisdiction were often points of conjunction for systems and procedures that linked public and private spheres, in particular those related to domestic and artisanal waste disposal. Ditches and sewers, after all, were also known in Iberia as continuas, that is extensions connecting private and artisanal residue with the local river, lake or sea. As for waste deemed fit for reuse, especially as fertilizer or raw
industrial material, Iberian towns exhibited all of the gathering and repurposing methods evidenced elsewhere. Comparative works on the peninsula’s numerous cities and subregions are lacking, as are studies documenting the implications, if any ensued from a public health perspective, of its transition from a predominantly Islamicate culture to a Christian hegemony. However, as Abigail Agresta has recently shown, the relevant sources for rewriting local environmental histories are both abundant and accessible, be they legislative, administrative or material. Moreover, they can predate the later fourteenth century, which has been the main chronological focus of the historiography so far. If such parallels with Italy offer some indication, there is once again no need to assume that Black Death triggered any and all preventative interventions in Iberia either.

The latter observation certainly holds for France. In Périgueux, for instance, court protocols from the early fourteenth century onwards attest private and municipal concerns about urban hygiene, from food and water provision, to industrial and artisanal pollution, to domestic waste disposal, including the maintenance of sanitary infrastructures. Human behavior played an acknowledged role in promoting public health; in one case from 1342, a judge reiterated a prohibition on throwing wastewater from windows, arguing that putrefying and fetid matter “poison the air and the people living nearby.” Aggressive interventions to stem specific maladies, moreover, likewise far predate the second pandemic, since containment measures (and public procedures for diagnosis) had already been developed with respect to those identified as lepers since at least the thirteenth century, reaching a violent
apogee by the early 1320s. Responses to the plague, by comparison, were mild, perhaps also because it was seen as a seasonal affliction.71

That is not to argue that municipal governments remained apathetic to Black Death. In 1349 Amiens, for example, the creation of new cemeteries was explicitly framed as a measure designed “to obviate the said corruption,” that is plague. That same year, magistrates in Troyes prohibited pigs from roaming the city for fear that their excrement would deteriorate local streets and waterways even further and present a graver danger to the citizens and residents of the city.72 By the fifteenth century, these experiences helped cities like Metz to ensure the provision of healthy food in adequate quantities.73 A comprehensive recent study thus plausibly argues that, in France, Black Death “led municipalities to rationalize and adopt more efficacious and coordinated measures.”74 But these measures were often neither new nor limited to hospitals and the provision of curative care.75

Finally, it should come as a little surprise that urban cleanliness, health and safety have gained the attention of residents (and, subsequently, students) of the Low Countries, among late medieval and early modern Europe’s most urbanized regions. Much of the scholarly attention here, reflecting a somewhat later proliferation of documents as compared with Italy, France and England, has been on and beyond the later fourteenth century, inadvertently offering a skewed impression of a correlation between the onset of Black Death and preventative measures. For the most part, any claims for such a correlation would be based mostly on the absence rather than the silence of the sources, which from the middle of the fourteenth century onwards document a range of people’s, guilds’ and governments’ public health concerns and preventative
actions. These run the usual gamut of interventions repeatedly mentioned above and largely based on the same Galenic principles shared by numerous societies across western Europe.

Compared with what appears to be typical for Italy and England, however, municipalities in the Low Countries rarely developed special organs or legal procedures specifically dedicated to environmental protection prior to the establishment of medical colleges or health boards in the sixteenth century. In part this may have to do with their relatively more contested political autonomy as compared with the Italian city-states or larger swathes of lands ruled by French or English kings. As local historians have shown, however, multi-tasking outfits such as Ghent’s konig van de ribauden (ribalds’ king) and his minions, Antwerp’s moosmeiers (dung carriers) and Bruges’ moerknechten (mud officers) routinely pursued certain types of polluters while devoting themselves to the removal of waste (often water-borne) and monitoring fire regulations. At the normative level, there is abundant documentation of municipalities’ desire to keep food and fresh water flowing into the city and waste and disease-bearing elements moving out of it. And, as both archaeologists and historians have shown, there are both material and administrative witnesses for these programs’ functioning, from sewers to cesspits and from salaries to lists of fines.

To tentatively sum up scholarship on western Europe, outside of Italy (and possibly Iberia), designated bodies with a clear preventative mandate were scarce. On the other hand, diverse urban officials were commonly charged with handling discrete aspects of public hygiene, there was robust legal infrastructure designed to encourage the creation of more salubrious living and working environments, and enforcement mechanisms that are consistently reflected in
documents and instruments of practice, at least for the major subregions briefly surveyed in this section. Collectively these paint an altogether different picture of medieval public health than earlier scholars have been wont to paint, and in which Black Death shone a rare ray of light upon an otherwise bleak healthscape. Indeed, should our definition of healthscaping expand beyond the prevention of plague specifically, it would reveal a common and sophisticated set of practices. As Irina Metzler notes, for instance, guilds were painfully aware of the challenges pertaining to their specific occupations and acted to reduce the risk of maiming and disease. And Italian, French and Iberian cities employed public physicians to care for the urban poor (including poor prison inmates), a practice which may have originated with the provision of medical care for non-elite combatants.\textsuperscript{79}

Further prophylactic means aimed at defending local environments across the medieval world included sequestering (but rarely exiling) people diagnosed with leprosy, addressing the needs of the mentally ill, increasing access to hospitals and regulating the movement of (and occasionally banning) prostitutes.\textsuperscript{80}

Curfew, finally, was likewise seen or at least justified as a way to increase the health and safety of urban residents across western Europe, especially as regards human violence and fire.\textsuperscript{81} As the next sections will show, such awareness to health risks alongside measures designed to counter them were common among Europe's neighbors and its farther-flung contemporaries.

Neighbors in Health I: East Rome

There is a certain disparity in the current knowledge about preventative practices between Latin Europe's closest (and themselves adjoining) neighbors, namely East Rome (Byzantium) and the Islamicate world of the Middle East, to
be treated in the next section. The current state of affairs owes partly to differences in modern scholarly foci, and partly reflects the survival pattern of pertinent sources. Compared with the Islamicate world, East Rome offers health historians less textual evidence, especially between the seventh and the fourteenth century, since few administrative documents of practice have come down to us, and chroniclers have seldom commented on prophylactic interventions. The region's archeologists have certainly made great strides in recent years to compensate for this silence, including through chemical analysis of human, animal and plant remains, although they have yet to juxtapose their findings systematically with the admittedly scarce evidence for population-level preventative measures. 82

That said, the fragmented state of the evidence for East Rome is no reason to assume that, here as elsewhere, preventative measures emerged mainly in response to the second pandemic or for that matter to the so-called Justinanai Plague of the mid-sixth century. 83 Indeed, sufficient sources attest local public health amenities, from sewers to markets to community physicians, well before the foundation of Constantinople. 84 These are enough reasons to doubt that local communities abandoned all healthscaping practices already established in the western Empire, encountered nothing by way of prophylactic theory or practice in their adopted or native region, or remained apathetic in the face of new and existing threats in later centuries. Instead, the main question that the region's health historians have yet to address is how did the administration of certain facilities and services pertaining to public health transform between Late Antiquity, the Byzantine sub-periods and the Ottoman era that followed. For instance, water guards (hydrophylakes) responsible for the flow of water (and
presumably of sewage) into and out of Constantinople are attested under Justinian (482-565) but then disappear from subsequent sources. A later functionary, the count of the waters (komes hydaton) seems to have operated out of the imperial tax office in the mid tenth century, and a high-ranking officer known as the water chamberlain (logothetes ton hydaton) is mentioned in a late eleventh-century chronicle. Yet it remains unclear whether these men (assuming they filled one and the same position) were perceived as taking over existing responsibilities or creating new ones, and if so, why. Their remits can only be surmised from the lacunae left by documents that are more explicit about imperial and provincial biopolitics.

For instance, to judge by one tenth-century manual, Constantinople’s de facto mayor (prefect or eparch), was to oversee diverse aspects of market retailing and artisanal production that had a clear bearing on public health and wellbeing. Among other duties, he was to ensure that no fishmonger salted fish for export, presumably in order to keep the city well fed, a rationale that may also underlie the provision to sell “remainders” of fish “which might decompose.” Bakers, moreover, were prohibited from keeping ovens in private dwellings, an industrial zoning restriction explicitly linked to “the inflammable character of the materials used.” And a similar threat was to be reduced in residential areas by ensuring that private persons did not stockpile kindlewood other than in open spaces, in order “to prevent the risk of conflagrations in the city owing to the inflammable character of the materials.” Whether and to what extent these regulations were enforced remains to be established, yet the least we can responsibly say at this stage is that Constantinople’s markets, much like their parallels in Europe (and as we shall soon see, across the Islamicate world),
served as arenas for promoting local regimes’ biopolitical agendas and thus as focal points for governments’ disciplining gaze. Presumably, water officials elsewhere across the empire had similar remits serving similar goals.

As the first section of this chapter already stressed, military life (as distinct from warfare) is an underexplored realm in the history of public health theory, policy and practice in premodernity. And what is true for medieval Latin Europe certainly applies to East Rome, home to a flourishing tradition of military treatises, which built on the preventative insights of Onasander’s Strategikos and Vegetius’ De re militari, briefly explored above. The influential text known today as Maurice’s Strategikon (12.B.22), for instance, advises that:

Healthy, clean places should be chosen for camps, and we should not stay too long in one spot, unless the air and the availability of supplies are more advantageous. Otherwise disease can spread among the troops. It is very important that sanitary needs not be taken care of inside the camp, but outside because of the disagreeable odor, especially if there is some reason for the army to remain in one place...[T]he horses must not be watered [in the river] above the camp. If they are, their trampling around will make the water muddy and useless...If it is a small stream, water the horses from buckets.

Much in keeping with that tradition, the anonymous Byzantine author of a Treatise on Strategy (eighth century) explained that the security of cities is about more than their walls’ thickness. Accordingly, he encouraged the ambitious general to investigate whether local water “is safe to drink and if there is enough
to supply the population of the city,” as well as “whether the [surrounding]
country produces enough food,” before embarking on a construction campaign.93

Somewhat later, treatises such as the Apparatus Bellicus (tenth century)
continued to share the Strategikon’s concern for ensuring water purity to protect
the health of soldiers.94 And the anonymous, late tenth-century Treatise on
Skirmishing (5.6–8) likewise warns against horses muddying the water, “which
could cause serious harm to the men and place them in real difficulty.”95 Nor did
middle Byzantine treatises neglect to instruct generals about how to situate
camps with combatants’ health clearly in mind. Leo VI’s Taktika, published in the
early tenth century, elaborates in particular on long-term military settlements,
which should steer clear of wooded areas and swamps, because “[t]he rising
vapors and foul smell of such places are unhealthy and bring pestilence and
deadly diseases to the army.”96 And in the later eleventh century, Kekaumenos’
Strategikon explicitly harks back to an ancient prophylactic tradition in calling to
avoid humid and malodorous places “because they are prone to disease,” and
refrain from staying put for too long in one place, given the greater risk of it
developing “a bad odor and from it diseases.”97 East Romans, in sum, much like
Latin Christians, recognized hazards attendant upon military life outside the
context of war and devised ways to reduce and prevent them. It remains to be
seen however if and to what extent their insights were put into practice in army
life and urban contexts.

The parallels between the two civilizations can be further extended as we
move from military to monastic life. East Roman monks largely adhered to the
administrative and spiritual vision outlined by St. Basil of Caesarea (329/330-
379), a fervent supporter of cenobitic monasticism. Although Basil never
composed a formal Rule, his dialogical writings, most notably the so-called Small and Large Asketikon, address many aspects of the brethren's regime, including their work toll, diet, clothing and access to medical care.\textsuperscript{98} (These ideas impacted Latin Christendom as well, also through St. Benedict’s direct exposure to them and his call for his own followers to familiarize themselves with Basil’s insights.) As in Latin Christendom, so in the Christian East, monks lived relatively privileged and sheltered lives from a biological and physical perspective, notwithstanding Basil’s stronger emphasis than Benedict’s on manual labor, simple garb and food, and his belief that disease was a form of divine punishment to be endured rather than cured. Whatever his original emphasis sought to achieve, however, it later gave way, allowing for additional or customized garb, diverse diets and recourse to medical care in a number of situations, alongside a shift in focus to liturgical routines and away from manual labor.\textsuperscript{99}

Thus, although the rhetoric of asceticism remained a strong influence in Byzantine monasticism, as it did in Latin Europe, it did not come entirely at the expense of communal health, including the salubriousness of monastic sites. For instance, the shrine of St. Thekla at Dalisandis in Seleucia (Anatolia) is described by a late fifth-century monk as nestled in a “pristine and suitable setting,” by which he meant that it:

\begin{quote}
Has numerous trees, lofty, thick, abounding in blossoms and fruit, and there are many very lovely springs, with very cold water, gushing out from under every plant and every rock, so to speak, flowing and coursing all around the church. And there is a nice breeze in this place, clear and
delightful. The birdsong overhead is absolutely marvelous and able to charm not just the visitor who is already relaxed and at ease but also one who is downcast and distraught. Thick and abundant grass is spread out over the earth in many colors, providing a place to rest for everyone.

The author, perhaps fearing he may sound equivocal about the healing impact of the place, completes the description by noting that “[t]here are even some sick people who have been restored to health only by a visit,”100 that is to say without the direct intervention of the saint or the local monks.

To take another famous example, the monastic hub on the Athos peninsula was lovingly described as a locus amoenus throughout the Middle Ages, an enclosed garden of delights. The appellation, a common motif in medieval Latin literature as well,101 also underscored the brethren’s remarkable spiritual as well as physical achievement in settling its harsh terrain. Yet in deliberately intensifying its settlement in the mid tenth century, St. Athanasius (c. 920- c. 1003) took the rhetoric surrounding the island in a new direction: as his biographer boasted, Athanasius managed to turn the mountain into a city. The trope, somewhat modified, appears in a fourteenth-century ékphrasis by an imperial chronicler, Nicephorus Gregorás (1295-1360), who portrayed Athos “as a self-sufficient agricultural institution molded on the example of the small, circumscribed, ideal polis devised by Plato.”102

From a health perspective, then, Byzantine monasteries were ideal cities more than just by name. They were located on sites perceived as (or turned, against great odds, into) salubrious places, where far-sighted abbots developed preventative routines for the brethren. Moreover, they served society at large
out of a commitment to Christian philanthropy. Communities and individual monks who chose to follow calls by Basil and Gregory of Nazianzus (329-389) to combine a life of contemplation (theoria) with good works (praxis), provided health services within their convents and embarked on urban outreach work. Various efforts, including regular poor relief, burial and even work as orderlies in local xenones or hospitals, flourished in the fourth and early fifth centuries, before the Council of Chalcedon (451) asserted the superiority of bishops over monks, leading to the latter’s near-disappearance from the urban charitable landscape. However, and despite unresolved debates on the appropriateness of monks’ exposure to the outside world, cloisters continued to provide curative and prophylactic services for the laity, including as institutions for the mentally ill, into the Ottoman Era.103

In different ways, then, urban administrations, military life and cenobitic monasticism contributed to fighting disease and promoting health at the population level well before Black Death struck the Byzantine Empire. They did so in certain ways and revealing particular tensions that are comparable to those characterizing healthscaping activities in western Europe, although the pressures incumbent upon a great capital such as Constantinople, which was far larger than any city to the west until the Industrial Revolution, put it in a league of its own. Given Constantinople’s paramount economic and political importance, it is small wonder that keeping it safe from any and all threats, while admittedly impossible, was nonetheless an imperative for any of its medieval and later rulers. Indeed, as Nükhet Varlik has recently shown for the early Ottoman period, the political fate of the Empire and the biological fate of the capital’s
residents were deeply intertwined. The foregone survey suggests that a similar connection can be traced for East Rome as well.

Neighbors in Health II: The Islamicate World

In his landmark study on Black Death in the Middle East, published in 1977, Michael Dols argued for a high degree of continuity in urban Muslims’ routines as they faced an evident crisis. Stressing stability, however, was something of a backhanded compliment in that context, since the observation sought to reflect religious elites’ ability to maintain “normative Muslim behavior,” reject a competing paradigm of contagionism and discourage individual flight in favor of maintaining vertical social bonds and existing political hierarchies. European Christians, by contrast, tended not to stand idly by while their metropolises turned into necropolises. And although they did flee and panic (and pray and repent for their sins, which many saw as the plague’s cause), Europeans also developed sanitary legislation and other preventative measures which, in time, helped reduce contagion and thereby limit the damage wrought by god’s anger. Later critics would challenge different facets of Dols’ comparison, yet from the present study’s perspective, his refracted narrative of European modernization is especially telling. For, by referring to it as such, he perpetuated a view of public health whose shortcomings, including a fixation on responses to epidemic disease, were discussed in the introduction to this book.

As Middle East historians have made abundantly clear, moreover, when it came to preventative measures, the Islamicate world had much more to offer than quietism and fatalism. Indeed, if East Rome presents us with several pieces of a larger puzzle, medieval Muslim societies have left elaborate written
documents and abundant material remains that can illuminate pre-plague healthscaping. Within this evidentiary basis, records relating to charitable foundations (awqâf; sg. waqf) are particularly prominent, and historians have long remarked their relevance for studying poor relief (especially through burial and the provision of food and clothing during Ramadan), religious education and various amenities, including—most importantly from this book’s perspective—urban hospitals, public baths and water and sewage conduits.\textsuperscript{108}

Augmenting waqf interventions were also steps taken by political elites and governments meant visibly to provide for urban populations, for instance by founding and financing hospices, hospitals, fountains, cisterns and water pipes, as well as organizing liquid and solid waste disposal. All of these interventions were frequently used to buttress claims to power and prestige by helping to support life, and evidence for them emerges from numerous types of written and especially material records from across the Islamicate world.\textsuperscript{109} Recognizing these efforts, and the ways in which they built on or broke with earlier provisions (Jewish, Roman, Sassanian, etc.) has altered the view of premodern prophylactic care in some of the region’s cities,\textsuperscript{110} although here as in Byzantium, healthscaping and biopower per se have received little attention as compared with traditional medical subject matter. Examining the relations between preventative theory, as recently elucidated by Justin Stearns,\textsuperscript{111} and urban practices, thus remains a major desideratum, especially for the pre-plague period.

There is no shortage of avenues for pursuing this goal. Compared with some parts of western Europe (but not Byzantium), the Islamicate world’s criminal court records and legal prescriptions (fatwās) remain mostly
unexplored for the purposes of establishing what were considered environmental nuisances and public health hazards and whether they could be legitimately and successfully prosecuted.\textsuperscript{112} The same applies to the single largest collection of documents covering this period, namely the Cairo Geniza, whose usefulness for medieval health history has been clearly if succinctly demonstrated by S.D. Goitein.\textsuperscript{113} Much more work can be done on the basis of the latter documents, whose transcription, translation and digital inventoring continues apace, a process that would be greatly augmented by identifying new evidence for what is perhaps the single most important agent of healthscaping in the Islamicate world, namely the urban market inspector, variously referred to as the \textit{muhtasib}, \textit{‘amil al-suq} and \textit{sahib al-suq}.\textsuperscript{114}

Fig. 5.2 A Muhtasib
The fourteenth-century savant Ibn Khaldûn describes this official emphatically as a religious appointment and states that his remit is designed to promote the caliph’s core duty “to command good and forbid evil.” The muhtasib’s actions, be they preventative, punitive or both, thus aimed to pave pious paths of least resistance, directing urban residents to act in a manner that will benefit the communal interest or good. It was a broad remit under which health, morality and safety could certainly be subsumed. For instance, he is to remove obstacles from the city’s streets, avoid the over-burdening of porters, tear down dilapidated houses whose imminent collapse might harm passersby and punish teachers who beat their pupils excessively. While he was not a court official, the muhtasib had full jurisdiction over deciding the legality of weights and measurements, and for determining the quality of foods and other market goods. As such, he partook in preventative activities that overlapped significantly with and perhaps even surpassed those of his European and Byzantine counterparts. At any rate, the office fits into a broader understanding of urban healthscaping since, according to Ibn Khaldûn, cities’ health strongly depended on the freshness of the air, water supply and access to sufficient pasture and food in general.

Until scholars uncover and explore records of practice that may shed further light on the hisba’s activities, however, we will continue to rely on
prescriptive manuals and the occasional appointment charter. These, at any rate, display a high degree of continuity, largely support Ibn Khaldûn’s description and yet offer a more granular view of premodern officialdom’s disciplining gaze and the negotiation of biopower. For health in this region too was an ultimate good secured by the muhtasib’s and his helpers’ policing, including a number of preventative activities that strongly resemble those of other urban officials in Europe and East Rome. A Saladin-era, eastern Mediterranean manual, for instance, is meticulous about describing the labor, product qualities and environmental responsibilities of bakers, butchers, skinners, water carriers, meat roasters, fish fryers, cooks, apothecaries, butter makers, phlebotomists and cuppers. In the case of baths, which are generally associated with ritual purity, the muhtasib is also responsible for ensuring a constant circulation of fresh water and air, including through fumigation, and for maintaining a pleasant environment in general. Last but not least, he is also to administer physicians’ oaths, underscoring on the one hand doctors’ moral obligations and on the other the market inspector’s (and by implication the caliph’s) importance in meeting urban health needs.118

A slightly later Andalusian text, probably composed in the early thirteenth century, likewise instructs the market inspector to observe personal hygiene and safety among the city’s artisans. Among other duties, he had to ensure that bakers washed their work trays daily and forbid them from working before dawn, “lest they fail to take enough care...because they are not fully awake.” He also had to “ensure that they bathe often, washing their face, especially during the summer.”119 As for hygiene among the butchers, the muhtasib has to verify that they cleaned their utensils daily, displayed their
weights prominently in their stalls and refrained from obstructing customers’ direct view of the meat on sale. The city’s public latrines and their safe evacuation too fall under his jurisdiction. Drawing an explicit link between latrines’ smooth operation and residents’ health, the manual instructs the muhtasib to:

Obligate his workers to drain the latrines’ contents and cover their buckets, of which they will have to provide better ones. Each bucket will be carried by two [workers] protecting it with their bodies so that it neither touches nor harms anyone; one [of them] will carry a bell in his hand to warn the people. He [i.e., the muhtasib] will forbid anyone from transporting two buckets by carrying one on each side, for this may give offense to people [by spilling].

Like other premodern healthscapers, muhtasibs and their aides had to translate disciplinary obligations into a variety of physical forms, including people’s dress and movement, their application at work, the quality of artifacts and produce on sale and the physical condition of public amenities such as markets, latrines, baths and streets. Hisba scholars have rightly underscored the paramount moral concerns of this office, a convergence of religious purity and bodily health that would have been familiar to western Europeans and Byzantines as well, even beyond their direct experience with this office in contact areas such as Iberia and the Eastern Mediterranean. As we have seen, urban statutes also articulated duties such as maintaining food and air quality in moral terms, and the notion that health had a decisively spiritual dimension.
alongside a material or bodily one would have been perfectly commonsensical well outside the Islamicate world. Thus, while the theological and political context of muhtasibs’ activities, as well as those of civic governments’ and waqifs’, certainly lent them a unique meaning, they all join the previous sections in illuminating the vibrancy of preventative practices across another large swath of the premodern world. In certain respects, they all harked back to Greco-Roman prophylactic principles shared by contiguous cultures, at times thanks to their preservation and use in Islamic sources and cities.123

A Glance Farther Afield

Looking beyond Europe for premodern preventative practices, not only fills a major lacuna, but also provides new vantage points from which to interpret the impact of a traditional narrative of modernization. Europe’s public health history continues to operate as a palimpsest in much of the historiography on other world regions as well,124 allowing modern observers to subject non-European cultures to what Gaytari Spivak has called epistemic violence.125 To recall, the public health movement is often construed as a response to the Industrial Revolution and the wild urbanization it bred; and as promoted by statism and nationalism no less than it was enabled by scientific and technological breakthroughs. Modern historians tend to assume that this specific convergence was absent elsewhere in the later eighteenth century, which meant that public health had to be “introduced” into other parts of the world in one of two ways: it was either exported as a set of technologies by imperial and colonial powers (occasionally foreshadowed by trade companies and religious missionaries), or else imported by robust enough regimes seeking to modernize and reap the
rewards attendant upon it. Tracing a country’s path to public health in terms of one of these two narratives thus affirms its cultural identity and nods at a particular political trajectory that is likely overburdened by the albatross of Euro-American modernity.\textsuperscript{126} In the independent, Western-facing monarchy of Bhutan, for instance, the introduction of biomedicine in the early twentieth century has recently been described in a semi-official publication as a welcome and desirable move, “catapulting the country from the middle ages to a thriving middle developed country in half a century.”\textsuperscript{127}

By contrast, the bio-medicalization of (former) colonies is rarely celebrated today as a great leap forward. Since the 1970s, historians of colonialism and imperialism have radically challenged the benign view of imposed medical modernization, emphasizing instead the strong presence of racist and classist biases in rolling out (or suppressing) preventative health programs among indigenes and their subordination to ruling elites’ military and economic agendas.\textsuperscript{128} The sobering observations by historians of Africa, the Americas and Asia have by and large altered a lingering perception, at least in some circles, of public health as a thin silver lining to an otherwise dark cloud of violent expansion and subjegation.\textsuperscript{129} Given this historiography’s agenda, however, it is slightly surprising that it left earlier indigenous prophylactic practices mostly unstudied, criticizing colonizers’ perceptions of a backward culture but seldom providing a grounded alternative for population-level interventions.\textsuperscript{130} Even among subaltern historians, illuminating medical pluralism and indigenes’ agency is mostly done in the context of negotiating biopower between missionaries, colonial medical establishments and local healers and leaders, or (most recently) the capacity of menial or subordinate
service givers drawn from local populations to shape curative policies, practices and experiences. Pre-existing, locally defined preventative routines, prophylactic medicine and environmental protection more broadly are usually absent from this picture.

There is however no need to accept (let alone retroject) Florence Nightingale’s (1820-1910) evaluation of the Indian bazaar, for instance, as “the first savage stage of social savage life,” or the Scottish surgeon John Dudgeon’s (1837-1901) quip that “[p]igs and dogs are the only sanitary office in China.”

Putting aside that poor hygiene, not to mention mass death, can be also chalked up to imperialistic militarization, urbanization, migration and their byproducts, it is more likely that newcomers—in whatever capacity they arrived—encountered a prophylactic terra incognita rather than a tabula rasa. Communal life in its diverse urban and rural forms involved numerous attempts to define and defend itself from real and perceived health hazards, targeting the organization of homes, shared spaces and facilities such as streets, plantations and markets. Broadsides against British governance techniques in India, for instance, including the public health programs they imposed upon native populations, clearly allude to preexisting prophylactic regimes.

For instance, reacting to the recent loss of millions of his countrymen to plague, a Bengali astrologer writing around 1899 claimed the decimation was merely a symptom of the land’s being “replete with sin and full of filth.” To his mind, it was a new state of affairs for which alien influence and its myopic local followers should be held responsible:
The fault of foreign admixture, exotic habits and regimes, changes in the mode of dress, eating of forbidden and unusual foods, the absence of kingly worship and the spirit of national service, the interruption of customs which favour the country, the excesses of civilization...the abandoning of medicines, language and actions which were attuned to the national environment, the excessive popularity of sugar and salt...the extreme popularity of oil born of the bowels of the earth (kerosene), poisonous-wood (stone-like coal) etc.—it is from these powerful actions of materials that India’s fundamentals are facing devastation.¹³⁵

Here, a combination of diet, medicine, worship and language are imaged as having preserved and elevated India as a nation from time immemorial, as did traditional approaches to its material environment, including heating and cooking, in a way that maintained a delicate equilibrium. From this author’s perspective, a preventative wall has now collapsed due to the introduction of imperial biomedicine.

Nor was the Subcontinent unique in fostering preventative measures well before the arrival of Europeans. In premodern Korea, to take another example, rulers conducted ritual offerings of rice, broth, liquor and meat meant to appease the evil spirits seen as responsible for the outbreak of epidemics. Medical texts moreover recommended fumigation (along with wearing talismans) as an effective way to keep disease at bay, and some evidence exists for the practice of quarantine and burning the belongings of victims of disease.¹³⁶ In Thailand, maintaining personal and population health meant balancing the three “morbid” humors (tridosa) of bile, wind and mucus also by correcting for environmental
factors such as temperature and humidity, which impacted communities as a whole. And a common recognition that evil spirits could spread disease encouraged Thai kings occasionally to order ceremonies of “illness destruction” to be carried out, “comprising the chanting of Buddhist sutras and the firing of cannons to ward off evil forces.”

Turning our gaze to pre-contact America, we also find compelling but frequently overlooked evidence for preventative regimes designed to impact local communities as a whole, for instance among the densely populated city-states of the Aztecs. In an insightful essay based on sixteenth-century reports by European colonizers, Herbert Harvey concluded that:

> It is apparent in its management of the urban environment that the Aztec state functioned to control or to eliminate potential sources of health hazards such as the water supply, garbage and sewerage disposal, and the maintenance of public places. Consistent with this was also its efforts in famine control.  

Here as elsewhere, organizing street cleaning, burial and cremation, human waste disposal and a stable water and food supply were recognized preventative practices deployed alongside the foundation of clinics and the facilitation of a thriving medicinal herb market. To Aztecs, these measures clearly coexisted with rather than undermined the notion that offending the gods could cause disease, as well as with concerted government efforts to employ healers and codify natural remedies. Other cases from the region spotlight how prophylactic care was more than a European import. In colonial Costa Rica, avers a recent study,
“established groups of medical and public health practitioners were there to
greet the agents of imperial public health with their own agenda,” which could,
perhaps in combination with an earlier introduction of miasma theory by
European missionaries, consist in resisting certain forms of industrial waste and
the presence of lepers, both thought to cause pollution.\textsuperscript{140} And a similar dynamic
is attested elsewhere in Central and South America, where a prolonged era of
contact between various natives, Europeans and Africans fostered idiosyncratic
approaches to preventative and curative healthcare, now referred to as medical
pluralism.\textsuperscript{141} The eventual dominance (but not triumph) of Western biomedicine,
however, has obscured the fact that earlier preventative approaches clearly
struck observers across the Americas as highly efficient.\textsuperscript{142}

Among countries that, from a relative position of power, chose to adopt
European biomedical theories and technologies related to public health, Japan
occupies a prominent place in the scholarly literature. Most histories of Japan
link the Meiji Period (1868-1912) to a concerted effort to turn the archipelago
from an implicitly backward feudal kingdom into an enlightened imperial power,
earlier and on a far larger scale than in the case of Bhutan mentioned above. The
role that public health plays within this statist-modernist paradigm is
predictably similar to that of parallel developments in Europe, once again
ignoring earlier and concurrent preventative programs. According to a recent
monograph, for example, “[t]he history of public health in Japan really begins in
1872,” in a process that challenged administrators to “capture the meaning of an
enterprise which was largely alien to Japanese experience.”\textsuperscript{143}

To be sure, there was much that was new in the prophylactic programs
rolled out among the islands’ military and civilian populations in the later
nineteenth century, as was the case in Europe. But the implication, namely that
the variety of Japanese communities up to that point had neither the sense nor
the motivation to fight disease and improve health as groups, is simply
untenable. It fails to account, for instance, for visible and well-documented
preventative routines in a growing number of castle-towns and cities since at
least the fourteenth century, which according to one survey consciously
addressed “the resolution of civil discord...fire-fighting duties, the disposal of
sewage and garbage, mutual aid in case of illness...and even self defence as the
structures of state authority atrophied.” Furthermore, it ignores a highly
developed system of urban water provision and waste disposal far preceding
industrialization, and a theoretical prophylactic literature, by and large
inherited from ancient China, which cast the individual body as a microcosm of
the nation and consequently tasked the Sage with “treat[ing] his system before
diseases arise.” In other words, population-level interventions in Japan too
hardly needed to await the adoption of European science and technology or the
rise of the nation state. Whatever their impact, communal prophylactics here
could rely just as well on local wisdom and affinity networks, including those
comprising of religious institutions.

Japan appropriated Chinese medicine and later served (along with Hong
Kong) as an important scientific hub in reshaping Chinese public health. Yet, as
the previous paragraph already suggested, the area currently known as China
had for centuries and even millennia promoted personal and community-level
prophylactic regimes. As in premodern Europe, Byzantium and the Islamicate
world, so in China (and Japan) medical thought considered a polluted
environment far more dangerous to health than individual contact with a sick
person or animal. Maintaining air and water purity was accordingly paramount, as was limiting immoral acts, especially in the public sphere. In terms of institutional biopower brokering, ruling dynasties’ grip on population health could be looser or firmer, but it generally comprised the appointment (or cooptation) of medical professionals, distributing medication and founding hospitals and clinics.

According to Angela Ki Che Leung, staple European interventions such as “quarantine, designating sanitary corridors, and prevention of contagious disease did appear here and there, but only in a sporadic and isolated manner. They never truly formed part of a Chinese way of thinking about public health.” Yet despite the author’s rejection of measures outside the strict purview of the state as anything more than occasional, well-attested practices of maintaining individual, domestic and communal hygiene suggest a more complex picture, at least if one is willing to consider the state as one among several healthscaping agents engaged in biopower brokering. This view is supported by archaeological discoveries of centuries-old drainage canals, the location and layout of cemeteries and the presence of public latrines, as well as by statements in descriptive sources (including Marco Polo’s travel journal) and prescriptive texts such as manuals for families, which were explicitly framed as an extension of private hygiene. Although some historians have tended to dismiss the possibility of premodern Chinese public health programs, there nonetheless seems to be some scope for local as well as comparative historical studies, once again underscoring the benefits of developing a long-term, bottom-up and inclusive view of health if we are to cut the Gordian knot of public health and modernity.
Conclusion

There is abundant evidence for prophylactic measures across broad swathes of what could be defined, if only from a Eurocentric perspective, as the premodern world. Each of the above sections was inevitably limited and in part selective, but for that matter hopefully representative in claiming that the concept and practice of preventative healthcare at the population level was unique neither to medieval Italy, nor premodern Europe, let alone the modern world. Much remains to be done if we are to chart continuities, changes and the transfer of theories and practices from a genuinely global perspective; establish what different communities defined as their collective health needs and hazards; illuminate what resources they had and how they developed new ones to promote health and fight disease; and, if possible, whether or not it had a positive impact on communities’ health outcomes. What is certain, at any rate, is that health was integral to urban dwellers’ conception of an ideal city or a community and to the political imagination of a good, balanced life.
At its core, *Roads to Health* sought to reconstruct what communal prophylactics could look like in later medieval Italy and trace how some urban societies pursued it. Attaining this goal meant navigating away from the myopic gaze of modern public health historiography, on the one hand, and the strong appeal of modernization to medieval and premodern historians, on the other. The book’s introduction explained at some length why identifying these magnets is a far easier task than counteracting them, a discrepancy that merits one final illustration. The example comes from a recent article published in *Hygiene and Infection Control* and dealing with responses to syphilis in early sixteenth-century Zurich. Having traced, on the basis of solid archival research, the actions of local physicians, clergymen and government personnel, the authors contextualize their findings within the broader course of public health history:

Five hundred years into the modern era, the main advances distinguishing present-day epidemic responses from the 16th century counterpart described here are: better hygiene, more accurate diagnostics, more effective cures, and vaccination. However, as the more recent history of epidemics such as HIV and Ebola have shown, the first line defence against an emergent infectious disease that is reticent to cures, is still based on a combination of the kind of measures implemented by the city of Zurich and similar urban centres in 16th century Europe.¹
The seemingly forthright conclusion encapsulates the uphill battle public health historians face, especially those working on pre-industrial Europe, but with implications for any region deviating from the imagined path of Euro-American modernity. Some of these challenges are clearly self-imposed, as evidenced in the above passage by the authors’ attachment to a certain chronology and an ameliorist narrative of medical history: hygiene, diagnostics and cures get better over time (and are goods in themselves), while vaccinations constitute an unequivocal advance. Outside this groove are explananda. As we have seen in chapter five, however, it is precisely the linearity behind such observations that modern health historians writing especially, but not exclusively, from a non-European and post-colonial perspective have been steadily exposing, interrogating and refuting. In this sense, the authors’ otherwise important emphasis on the survival into modernity of earlier preventative measures does not seem to challenge the reigning paradigm but instead reinforces it.

Not surprisingly, therefore, the authors chose to focus on reactive rather than routine measures at the origin of preventative practices. However well-meaning, a historiography emphasizing successful and intentionally modern-sounding responses to epidemic threats unwittingly perpetuates the notion that medieval, pre- or non-modern communities were (and remain) generally apathetic to health risks, even though they could occasionally rise to address a specific and ongoing event, such as plague, famine or war. This speed-bump view of historical change and of public health history in particular is typical of benign but ultimately paternalistic approaches to earlier civilizations’ “achievements,” as articulated by scholars such as René Sand and George Rosen. To their credit,
Sand, Rosen and others at least recognized that public health history did not begin with nation states, great men in white robes, statistics, germ theory or representative governments. Yet in echoes of this tradition of applied epidemiology, the Zurich historians continue to celebrate measures that they construe to be the exclusive result of a sudden onslaught, rather than explore the possibility that these, at least in part, built on preexisting infrastructures and as such can be understood also as an extension of prophylactic ideas and policies long in place. If more historians would begin merely to hypothesize the latter, to see them as a possibility, perhaps a less biased perspective may emerge on concepts of health that do not necessarily comply with twenty-first-century, Euro-American definitions. This much-needed corrective will benefit premodern and non-European fields alike.

A final and related challenge captured by the passage is that, while many medical historians may occasionally recognize parallel regional developments, their fixation on heralds of modernity and fascination with local struggles against epidemic disease tend to obscure a more complex view of urban preventative measures across and beyond Europe. Once again, in the absence of broader contexts, even a well-developed case study such as fighting syphilis in sixteenth-century Zurich falls short of exploiting more fully the possibilities afforded by the urban past. The very set of interventions the authors describe, including Zurich’s reliance on a fruitful cooperation between diverse urban agents, and which the article rightly claims continued to exercise great influence for centuries to come, far predates the sixteenth century, as we have repeatedly seen throughout this book. But if so, how are we to fit these practices into a better-informed understanding of modernity’s dawn, assuming it remains the
ultimate explanandum? What exactly changed? How did the change come about?
And (how) did people at the time experience and understand it?

One way to answer such questions is to develop a closer dialogue than is
the wont of many health historians currently working on either side of an
accepted pre/modern divide. Since such a dialogue has so far been quite limited,
and because the influence of a generic modernist paradigm has been so
pervasive in the historiography of public health, most premodernists continue to
take their cues from modernists, rather than (also) goading the latter to travel
with history, not against it. At any rate, the near absence of two-way traffic has
been perpetuating circular arguments about modernization and the premodern
condition as far as public health is concerned, by holding onto a narrow concept
of what community prophylactics are and therefore should be about. The present
book has been consciously written with an eye towards countering the
historiographical magnet of modernity and fostering a new conversation, among
others by suggesting that several analytical frameworks and concepts strongly
associated with modernity (ANT, hybridity, the public sphere, healthscaping and
harm reduction, governmentality and biopower) may also be relevant to earlier
eras, if only as discursive bridges. That is not to deny qualitative differences
between approaches to preventative healthcare across the centuries and
between regions, but rather to illuminate the facile manner in which saming and
othering are so often deployed in the context of public health history. There is
enough sound research, on a growing number of historical cities and non-
industrialied regions, to rethink dated periodizations, originally put in place by
imperial and colonial ideologies and kept there by ignorance, inertia and even
intentional agendas.²
Some promising winds of change have begun to blow. Tom Crook’s recent monograph, *Governing Systems: Modernity and the Making of Public Health in England, 1830–1910*, offers a rare recognition among specialists of deep continuities in public health history across a traditional pre/modern divide. Crook willingly acknowledges, for instance, the existence of public health initiatives “embedded in a seam of administrative units designed to secure the ‘common weal’ and the ‘publick good’” in the Middle Ages.³ Focusing on England (and consciously responding to Carole Rawcliffe’s work), Crook characterizes such well-documented initiatives as systems that cohered around “the authority of property,” “the distribution of offices according to social status” and a “resort to court-based proceedings.” These administrative and judicial actions were also “supplemented by the actions of various agents,” which were aimed at both curing and prevention among entire populations, including by policing the urban environment on a routine basis.⁴ So far, the emerging picture strongly echoes the major conclusions drawn by Rawcliffe and others. Yet there is still much at stake for Crook in identifying and thus preserving a qualitative difference between the premodern and modern eras when it comes to public health. As he puts it:

[T]he transition to a modern culture of governance does not reside in the existence or invention of [public health] systems per se. Premodern systems of governing public health were just that: intricate and active systems, composed of multiple roles and responsibilities, and characterized by a shared sense of order and authority. These differences [between premodernity and modernity reside in...] the sheer scale and ambition of public health...and its emergence as a differentiated domain of
governance...[and] the sense of human possibilities that attended their conception and their recurrent critique and refinement.\(^5\)

An admixture of scale, a specific mandate and a new kind of human desire, promoted and honed by experimentation, thus defines what set modern public health apart from its earlier interventions, which are emphatically not to be considered as mere preludes or downright oxymorons. In their historiographical context, Crook’s words sound fresh, reassuringly thoughtful and unusually cognizant of recent research on premodern regions. However, and at the risk of looking a gift-horse in the mouth: was a Hygeiopolis really inconceivable in the premodern world? And were public health systems in earlier eras merely a well-meant but ultimately improvised patchwork? As historians of medieval cities and their culture have repeatedly shown, fine health (however defined) was integral to the imagination of good government in that era. Ideologues and urban residents routinely appropriated the imaginary of Troy, Athens, Carthage, Rome and Jerusalem and merged them with those of Paradise and heaven, disease-free utopias if there ever were any in the Judeo-Christian imagination.\(^6\) The opening anecdote of this book offered an Italian example of such discourses, to which many parallels can be found, including for the British Isles.\(^7\)

As subsequent chapters of this book have shown, moreover, health was not only a governing metaphor for the ideal medieval city or polity (one, to be sure, that is unlikely to have emerged only with medieval urbanization), but it is also attested as a structuring concept in urban governance methods and expertises. The presence of both discursive and applied quests for health among the cities of Italy in the period under examination should by now be clear, that is
well before Black Death struck, let alone the foundation of local Sanità or health boards. Indeed, the roads masters at the center of our story were infrastructure specialists who understood their role in urban political economies also as promoters of health, safety and the general wellbeing of their communities, much like other healthscaping agents at the time such as damage assessors, physicians, astrologers, guilds, friars, priests and charitable institutions. Political elites across the peninsula defined viarii’s remits, alongside those of other officials and non-governmental institutions, in keeping with then-current prophylactic theory, as did numerous residents who helped and resisted official norms, even if their specific motivations for doing so could lie beyond the strict goal of promoting public health. Crook’s qualitative difference here is based on the rise of a “differentiated domain of governance” in modernity. Discursively, at least, that domain is attested both in Italy and the British Isles well before the eighteenth century. If the crux of the matter, moreover, is the convergence of a prophylactic mission and a single office overseeing any and all public-health-related matters, then such a moment has yet (and, given the boundless remit, is unlikely) to arrive.

Nor were Italian city-states or later medieval cities in general anomalous in the premodern landscape. As chapter five stressed, establishing an ideal military campsite or a resilient monastery consciously involved and invoked preventative healthcare considerations, communicated by theorists and executed by practitioners across medieval Europe. All these, as well as further instances of urban healthscaping, are documented in Europe and the Middle East from Late Antiquity at the latest, and far earlier in other world regions, from Japan, to India, to Mexico. In sum, even the briefest exploration of sources for
studying prophylactic communal health in earlier settings than modernity suggests serious alternatives for rethinking a common narrative of public health history.

If explicit remits and a desire for sustainably healthy populations were hardly unique to modern public health, does scale—Crook’s first criterion—fare better under historical scrutiny? The answer here depends strongly on the region under discussion. England, Crook’s focus, experienced intensive urbanization since the mid eighteenth century, but densely urbanized regions such as the Low Countries and central and northern Italy, alongside a number of major urban centers such as Paris, Cairo, Baghdad, Edo and Constantinople, had also by then developed intricate governance apparatuses that predated industrialization. These experimented with diverse forms of collaboration between private and public sectors and relied on diverse fields of expertise and pertinent claims to authority that were rarely proclaimed from (an imagined) political top down. Regimes’ legitimation practices, finally, harnessed health discourses and related enforcement mechanisms aimed at entire urban populations, even if these were often (but not always) modest by comparison to their modern counterparts.

It is true, on the other hand, that kingdoms, principalities as well as the Catholic Church (Latin Europe’s largest NGO) were less dynamic as compared with some of their urban counterparts when it came to rolling out prophylactic and curative programs. But that hardly means that biopower brokering was beyond their scope; rather, their capacity to do so appears—albeit from a modern perspective—to be limited by the infrastructures at their disposal. It is here that Crook’s point about scale comes closer to capturing a potentially
substantial difference between modern and medieval public health. It does however require further evidence in terms of the relative challenge governments faced and the specific combination of material, logistical, political and intellectual conditions defining it, even before looking at wide regional variations and chronologies, which may further destabilize a neat periodization. Until the latter is achieved, therefore, it is plausible that, in some key respects, what we are dealing with essentially is a difference in degree, not kind, at least when it came to ubiquitous healthscaping outfits (or clusters thereof) and their shared goals and underlying ideologies.

Beyond changes evident among certain regions and polities, then, many questions remain open about what is inherently modern about public health, preventative measures designed to improve health and fight disease at the population level. Health paradigms had certainly, if gradually and inconclusively, changed, at least across much of Euro-America, in the transition from humoral to germ theory, and in the highly significant, if ultimately limited, attempt to dislodge religion, piety and spirituality from the core definition of community prophylactics. But that, too, as this book contends, does not negate the possibility of preventative interventions based on fundamentally different paradigms of health, and which were experienced as such. Nor does it speak to the efficacy or impact of such interventions since—leaving aside the great disparities in modern health standards even within developed countries—health historians and archaeologists of western Europe have yet to establish the specific role played by earlier interventions in promoting population-level health from a modern, biomedical perspective, let alone a premmoden humoral one.
Health paradigms die hard. In scholarship and the popular imagination, public health remains feted as a key if not the ultimate accouterment of modernity, rendering premodern public health (or its specific, medieval variant) as either pretentious or downright an oxymoron. Yet, if a clear correlation between a generally accepted timeline of modernization and the emergence of public health cannot be grounded in historical fact, perhaps it is time to question the premise of the linkage in the first place. Perhaps, like our colleagues tilling the field of post-colonial studies, medievalists and modernists alike can begin to resist the ideology at its base and the shakey conclusions drawn from it.
Appendixes

Appendix 1: Fines to be Imposed by Lucca's Roads Masters

Source: ASLu, CVP 1, fols. 1r-8v (early-mid fourteenth century)

<table>
<thead>
<tr>
<th>Violation</th>
<th>Fine (in lire, by default)</th>
<th>Half to accuser</th>
<th>Officials’ fine</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Neglecting oven maintenance</td>
<td>10</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>2. Polluting water with liquid waste from dyers, metallurgists, soap makers and steam-baths</td>
<td>&lt; 5</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>3. All other kinds of industrial pollution</td>
<td>&lt; 10&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Littering before one’s home on a public way</td>
<td>&lt; 20s.</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>5. Using public wells for washing, cleaning or watering animals</td>
<td>10s.</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>6. Disposing of lime, earth or major industrial waste in public areas</td>
<td>&lt; 20s.</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>7. Blocking or appropriating waterways for private use</td>
<td>&lt; 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Blocking sewers and drains</td>
<td>&lt; 40s.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Neglecting sewers and drains passing through one’s property</td>
<td>&lt; 10</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>10.</td>
<td>Failing to enclose and bury sewers in one's property</td>
<td>$&lt; 25$</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Limiting a sewer canal's flow</td>
<td>$&lt; 10$</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Failing to conceal latrines from public view</td>
<td>$10^2$</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Keeping pigs and horses within the city walls</td>
<td>$&lt; 40$.³</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Selling pigs and horses in Piazza San Michele or its environs</td>
<td>$&lt; 40.$ +</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Damaging public walls or dykes</td>
<td>$&lt; 25$</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Occupying or damaging a public road</td>
<td>$10$ + 100</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Appropriating or damaging a public space or work</td>
<td>$25$</td>
<td>10</td>
</tr>
<tr>
<td>18.</td>
<td>Defiling the animal troughs in front of Porta San Pietro</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Allowing an animal to damage troughs</td>
<td>$10$ +</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Washing cloths in fountains and canals leading to troughs</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>Destroying fountains or canals</td>
<td>$100$ + repairs⁴</td>
<td>100</td>
</tr>
<tr>
<td>22.</td>
<td>Allowing animal blood to flow into a public space</td>
<td>10</td>
<td>200</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>23. Obstructing a public road, street, bridge or canal</td>
<td>&lt; 25 a person; &lt; 10 per town</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>24. Slaughtering animals and disposing of carcasses near the city walls</td>
<td>100s.</td>
<td>+5</td>
<td></td>
</tr>
<tr>
<td>25. Working with skins or wool outside designated areas</td>
<td>&lt; 10</td>
<td>+</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 2: Text and Translation of Vernacular Promulgations by Lucca's Roads Masters

a. Text

Source: ASLu, CVP 8, fols. 39r-40v (July-November 1347)¹

[1.] Bandisce da parte del maggiore officiale delle vie e de publichi del comune di Luccha:

Che neuno fornario della citta di Luccha, borghi o sobborghi debbia ne possa tenere sopra lo suo forno, per modo che portasse alcuno pericolo, alcuna quantita di stipa se non quanta bizogna per una septimana al suo forno, ne etiando alcuna quantita di mortora secchare, a quella pena che al dicto officiale piacesse di tollere secondo la forma dello statuto.

E che nulla persona possa ne debbia abbeverare alcuna bestia sopra ad alcuno pozzo della citta di Luccha, borghi o sobborghi, ne lavorare o fare lavorare alcuna cosa presso a dicti possi a quattro braccia, a quella pena la quale si contiene nelli statuti.

E che niuna persona gatti o faccia gittare in della citta di Luccha, borghi o sobborghi alcuna cosa morta o bructura perlla quale ne possa uscire alcuna puzza, overo alcuna altra cosa che occupasse alcuna via della citta di Luccha, borghi e sobborghi alla dicta pena.

E che nulla persona guasti, impedisca, strami, o in alcuno modo occupi alcuna via, strada, ponte, o chiavita della dicta citta, borghi o sobborghi, distrecto, contado, o forza, a quella pena che al dicto officiale piacesse di tollere.
E che nulla persona ardisca overo presumma tenere nella citta di Luccha overo
borghi alcuno porco overo troia [fol. 39v] contra la forma dello staduto, alla pena
che dicta e di sopra.

E che ciaschiduno tinctore, tavernaro, pellario, overo coraio o stufaiuolo
debbiano tenere necto li loro acquai; e ogni vigilia de festa debbiano quelli
rimondare e nectar e etiando dinanti alle lori bocteghe tenere senza alcuna
bructura, a quella pena che si contiene nello statuto e al suo arbitrio.

E a ciaschiduno sia licito di accusare e dinonsiare chi contrafacesse, e sarali
tenuto credenza, e ara parte della condannagione.

E che tutti li consoli delle contrade e bracci della citta di Luccha, borghi e
sobborghi debbiano comparire dinanti al dicto officiale, di qui a octo die proximi
che verrano.

E che nulla persona, di qualunque condicione sia, ardischa overo presuma di fare
alcuno danno o guasto in alcuno modo in del prato del comune alla pena de libri
xxv per ciaschiduno e ciascuna volta.

Anche che nulla persona possa ne debbia tenere [o] conducere sopra o per illo
prato del comune alcuno carro o carrecta o treggia, alla dicta pena.

Anche che nulla persona tegna o conduca alcuna bestia sopra il dicto prato a
pastare o in altro modo tenere, alla dicta pena.

E a ciaschiduno sia licto di accusare e dinontiare chi contrafacesse e sarali
tenuto credenza, e [40r] ara parte della condannagione.

[Closing passage, in Latin, indicates that on 2 July Jacopo Braccini, the communal
herald, publicly communicated these regulations]

[2.] Bandisce da parte del maggiore officiale delle vie del comune di Luccha:
Che ogni persona cittadina e forestiera, la quale habiti in della citta di Luccha e in de borghi, la quale habbia in della dicta citta casa propria o conducta, faccia conciare e astricare dinanzi alle loro case bene e convenncuilmente in qualunque parte lo dicto astraco e sconcio e guasto, di qui a xv die proximi che vengnono, a pena di libri x a chi contrafacesse, sappiendo che il dicto officiale ne fara fare solemne inquisitio, passato il dicto termine, contra qualunque persona non observera al presente bando; e a ciaschiduno sia lico di denonsiare qualunque persona contrafacesese, e ara la terza parte della condannagione e e [sic] sarali tenuto credenza.

E che ciaschiduna persona cittadina e forestiera, la quale habiti in della dicta citta, ogni sabato e vigilia di festa solemne faccia spazzare e nectare le vie dinanzi alle loro case a pena di soldi xx per ciaschiduno che contrafacisse; e ciaschiduno sia licito di dinonsiare e ara la meta della condannagione.

E che tutti i consoli delle contrade e bracci della citta di Luccha e de borghi, di que a tre di proximi che anno avenire, habbiano facto sconborare le loro contrade e bracci di tutte pietre pezzolame e minuzzame di matoni e d’ogni altra cosa la quale fosse occupamento di via publica alle spese delle loro contrade e bracci, a pena di soldi xx per ciaschiduno consolo in suo proprio nome.

[Publicly announced on 28 August] [40v]

[3.] Bandisce da parte del maggiore officiale delle vie che qualunque persona che pegnorata sia per cagione delle chiavate che si fano fare per Nicolao Busdiraghi fuor dellantiporto del Molino di porta san Gervagi, per lo soprascritto officio, di qui a viii di proximi che ano avenire, quale pengnora habbiano ricolte, sappiendo che passato il dicto termine le dicte pengnora si vendrano overo
s’impegnoreranno per quella somma di che ano a pagare per la cagione soprascritta.

[Publicly announced on 8 November]

[4.] Bandisce da parte del maggiore officiale delle vie che qualunque persona, di qualunque condizione sia, la quale habbia pengnora sia perllo officio delle vie per qualunque cagione, di qui a viii die proximi che ano avenire quelle pregnora habbiano riscosse, sapiendo che passato il dicto termine le dicte pengnora si venderano e non sara tenuto loro alcuna ragione.

[Publicly announced on 18 November]

b. Translation

[1.] It is decreed by the Major Official of the Roads and Public Works of the Commune of Lucca:

That no baker in the city of Lucca, its towns or suburbs should or may keep any quantity of firewood above his oven in such a way that might pose any danger, beyond what is necessary to operate his oven for one week, let alone without any water buckets for extinguishing fire. Under a penalty that may please the said official to impose according to the form of the statute.

Also, no one may or should water any animal from a well in the city of Lucca, its towns or suburbs, nor work or have work carried out less than four bracchia away from these wells. Under the [relevant] penalty contained in the statutes.

Also, no one may dispose or have disposed in the city of Lucca, its towns or suburbs of any dead or burnt matter from which any stench might rise, or indeed
of any matter that might block any road in the city of Lucca, its towns or suburbs. Subject to the said penalty.

Also, let no one break, block, litter or in any way occupy any road, street, bridge or gate of the said city, towns or suburbs, district, hinterland or fortress. Under the penalty it may please the said official to impose.

Also, let no one dare or presume to maintain in the city of Lucca or its towns any pig or sow against the form of the statute. Under the aforementioned penalty.

Also, each and every dyer, inn-keeper, skinner, tanner and steam-bath worker is obliged to keep their basins clean; and on every feast vigil they must empty and clean them and maintain their shops clean of any filth, including their shop fronts. Under the penalty contained in the statute and its judgment.

Also, anyone may accuse and denounce a perpetrator; and to him shall the greater trust be given and he will have a share of the fine.

Also, all the consuls of the hinterland and extensions of the city of Lucca, its towns and suburbs must appear before the said official within the next eight days.

Also, no one, of whatever rank, may dare or presume to cause any damage or blockage in the commune’s field. Under penalty of 25 lire for each person and occasion.

Also, no one may or should maintain or lead across the said field of the commune any cart, carriage or sled, under the same penalty.

Also, no one may maintain or lead any animal across the said field for pasture or to maintain it in any other way, under the said penalty.

Also, anyone may accuse and denounce any perpetrator; and to him shall the greater trust be given and he will have a share of the fine.
[2.] It is decreed by the Major Official of the Roads of the Commune of Lucca:
That any citizen and foreigner residing in the city of Lucca and its towns who
owns or rents a property in that city shall have the sidewalk in front of their
homes leveled and paved well and appropriately address any aspect of the said
leveling, paving and repair within the next fifteen days, under penalty of 10 lire
against the offender; knowing that the said official will carry out a full
investigation, once the set date had elapsed, against anyone who will not observe
the present instruction. And anyone may denounce any offender, and will have a
third of the fine, and he will be given greater credence.
Also, any person, citizen or foreigner, who lives in the said city, must tidy up and
clean the roads in front of their houses every Saturday and on the vigil of every
solemn feast, under penalty of 20 soldi for each offender. And anyone may
denounce [it] and will receive half the fine.
Also, all the consuls of the territories and extensions of the city of Lucca and its
towns will have, within the next three days, cleared these areas of any pieces of
rock and brick and any other matter that might block a public road, at the
expense of their territories and extensions, under penalty of 20 soldi for each
consul personally.

[3.] It is decreed by the Major Official of the Roads that, whoever was fined by
this office on account of the gates being made by Nicolao Busdiraghi outside the
front entrance to the mill of the San Gervasio gate: these fines are to be collected
within the next eight days; knowing that, once the set date elapses, the said fines
will be farmed out or indeed increase by the amount of the fine to be paid for the aforementioned reason.

[4.] It is decreed by the Major Official of the Roads that any person, of whatever rank, who was fined by the said roads office for whatever reason, must pay their fine within the next eight days; knowing that, once the set time has elapsed, the said fine will be farmed out and no consideration will be given to them.
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Capitano del popolo, Giudici: 376, 400, 441, 710, 720, 806
Governo, Statuti: 34, 41, 43-47
Podestà, Fango: 1-33

Archivio di Stato di Lucca
Anziani, Deliberazioni: 5, 9, 12, 14, 18, 24, 28
Consiglio Generale, Riformagioni pubbliche: 6, 11
Curia delle vie e de’ pubblici: 1-13
Sentenze e bandi: 41
Statuti: 1-15

Archivio di Stato di Orvieto
Giudiziario, Podestà, Capitano del Popolo e Vicario: 1-2
Riformagioni: 69-70, 132-37

Archivio di Stato di Pistoia
Comue di Pistoia, Podestà: 18
Raccolte: 5

Archivio di Stato di Perugia
Comune, Podestà: 2, 7
Giudiziario Antico: 2

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Ordinati: 1-4

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279
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Index

Actor-Network Theory (ANT)
Africa
Agamben, Giorgio
Aglie
air, pollution of; see also miasma
Ala
Alberti, Leon Battista
Albiano
Alice Inferiore
Alluvioni Cambiò
Amelia
America
Amiens
Andrate
Anfo
animals as public health risks; see also pigs
Antiquity
Antwerp
Aquasanta (Molise)
Aquaviva (Marche)
Aquinas, Thomas
archeology
Arrizabalaga, Jon
Ascoli Piceno
Asia
Aspra
Asti
Athens
Athos
Athanasius, St., reformer of Athos
Augustine of Hippo
Australia
Azeglio
Aztecs
Badia Tedalda
Baghdad
Bairo
Bakhtin, Mikhail
Ballester, Luis García
Barbania
Barbarossa, Frederick
Baroni, Giorgio
Basil of Caesarea
baths, public
Bayless, Martha
Bellino (Pidemont)
Belluno (Veneto)
Benedict of Nursia (St. Benedict)

Benestare (Calabria)

Bergamo

Berti, Giorgio

Bhabha, Homi K.

Bhutan

biopolitics

Black Death

Bologna

Bonaventure of Bagnoletto (St. Bonaventure)

Bonfield, Christopher

Bonvesin de la Riva

Borgo Franco

Borgo San Lorenzo di Mugello

Bra

British Isles

Brockington, Colin Fraser

Brosso

Bruges

Bruni, Leonardo

burial

butchers and butchering

Butler, Sara M.

Byzantium
Cairo
Caluso

*camparius*

Campbell, Bruce
Camporotondo
Canischio

capitano del popolo, responsibility over public health; see also podestà
Caravino
Carthage
Castelfranco di Sopra
Castiglione Ubertini
Catholic Church
Cavallo, Sandra

cesspits; see also drains; latrines
Chadwick, Edwin

charity; see also *waqf*
China
Chiaverano
Chivasso
Cipolla, Carlo M.

Cistercian monasticism; see also monasticism
Cittadella
Clairvaux / Chiaravalle
Cohen, Deborah
Colle di Val d’Elsa
colonialism
Como
Constantinople
Cosmacini, Giorgio
Costa Rica
Council of Chalcedon
court protocols, as historical sources
Crook, Tom
Cuneo
damage assessors
Darfo
Davis, Kathleen
De Certeau, Michel
De Pizan, Christine
demography, urban
Deruta
Devotio moderna
Dey, Hendrik
doctor, of medicine
Dols, Michael
Douglas, Mary
drains and gutters; see also cesspits; latrines
Dronero
dung
dyers and dying

East Rome: see Byzantium

Edo

Empoli

environment; see also infrastructure; roads masters

policing

rural

urban

*fango* officer: see roads master

Farley, Tom

Feltre

Ferentino

Ferrara

Ferrer, Vincent

Fiastra

field master: see *camparius*

Figline

fire

Fischer, Alfons

flood

Florence

*Fondaco*, Lucca's office of

Forrest, Ian
Fossato

Foucault, Michel

France

furnaces; see also labor safety

Galen and Galenism

Germany

Geniza (Cairo)

Ghent

Giovanni da Viterbo

GIS (Geographical Information Systems)

Goa

Goitein, S.D.

Goldwhaite, Richard

governmentality

Greece (ancient)

Gregorás, Nicephorus

Gregory of Nazianzus

guilds

gutters: see drains

Habermas, Jürgen

harm reduction

Harrison, Mark

Harvey, Herbert
health,

modern paradigms of

medieval definitions of

health boards (Sanità)

health literacy

healthscaping

heralds (town criers)

hinterland, as hub for preventative practices

Hippocrates and Hippocratic medicine

hisba: see muhtasib

Hobbes, Thomas

Hong Kong

Horden, Peregrine

Humiliati

hygiene

  domestic

  personal

  public and urban

Iberia

Ibn Khaldûn

imperialism

India

inns and inn-keepers

Industrial Revolution
infrastructure; see also environment

fines for damaging

intromission, theory of disease transmission through

Iran

Islamicate world

Italy

Ivrea

Japan

Jerusalem

Jews

Jørgensen, Dolly

Korea

labor safety

L'Aquila

Latour, Bruno

latrines; see also cesspits; drains; waste disposal

Laures, Robert

Lefebvre, Henri

Le Goff, Jacques

Leguay, Jean-Pierre

leprosaria and leprosy

Lessolo
Leung, Angela Ki Che
Lindemann, Mary
litigation
Lodi
London
Low Countries
Lucca

Mantua
Map, Walter
market (urban)
  market inspector; see also muhtasib
  selling illicit produce
  selling off-hours or offsite
Massa and Cozzile
Mazzi, Maria Serena
McLeery, Iona
McVaugh, Michael
medicine: see also doctors; Galen; health; Hippocrates
mendicant orders
Mentoulles
Metz
Metzler, Irina
miasma; see also health
Milan
military treatises: see Byzantium; public health
mills and millruns
modernity
Monastero San Eugenio
monasticism; see also Cistercian monasticism; mendicant orders
Byzantine
Latin
Montepulciano
Monteriggioni
Montevettolini
Montopoli
Montpellier
Monty Python
Morrison, Susan Signe
Mughals
muhtasib
Munkhoff, Richelle

Naples
Naso, Irma
New York City
Nicoud, Marilyn
Nightingale, Florence
Nizza Monferrato
Noci (Apulia)
odors, as health risks; see also air; miasma

Oglianico

Oliva (Lombardy)

Onasander

Orte

Orvieto

Ottoman Empire

ovens; see furnaces

Ozenga

Padua

Palermo

Papal State

Paradise

Paravicini Bagliani, Agostino

Périgueux

Paris

Pero (Lombardy)

Perugia

Piacenza

Piancastagnaio

Piedmont

pigs

Pinerolo
Pirenne, Henri

Pisa

Pistoia

Plato

podestà, responsibility over public health; see also capitano del popolo

Polo, Marco

Ponte a Sieve

pope and the papal curia

Porter, Dorothy

postcolonial studies

Pragelato

Pratieghi

premodernity

private property; see also public sphere

prostitution

public health; see also environment; miasma

as byproduct of modernity

historical study of

in military

in monasticism

public sphere

Pullan, Brian

quarantine
Rabinow, Paul
Rapallo
Ravenna
Rawcliffe, Carole
rebels
Renaissance of the twelfth century
Rieti
Ripi
risk, sites and communities at; management of
Rivoli
roads (including waterways)
   as anthropological site
roads masters;
   fango
   iudex viarum
   magistri hedificiorum
   viarius
   collaboration with fields masters
   collaboration with damage assessors
   collaboration with other officials
   parallel offices in Europe
   parallel offices in Italian Peninsula
   parallel offices in premodern world; see also muhtasib
Roman Empire
Rome (city);
magistri hedificiorum: see roads master

papacy's influence on healthscape

Saint Peter's Basilica

Santo Spirito hospital

Rose, Nikolas

Rosen, George

Sabine, Ernst

Salerno

Saluzzo

Sambuca

Sand, René

Sanità; see also health boards

Santa Maria a Monte

Saragossa

SARS

Savoy, Thomas of Scandinavia

Scarperia

Scott, James C.

Settimo

sexual misconduct; see also prostitution

Shepard, Roy J.

Siena

sin; see also, health
Skelton, Leona
Skinner, Patricia
Sovicille
spatial theory
Spivak, Gaytari
Spoleto
Stearns, Justin
Storey, Tessa
Strambino
swamp
tanners and tanning
Thailand
Thekla, St., shrine at Dalisandis
Tivoli
Trequanda
Treviso
Troy
Troyes
Tuchman, Barbara
Turin
United States
Valgrana
Valle Maira Superiore

Varlik, Nükhet

Varro

Vegetius

Venice

Verolengo

Verona

viarius: see roads master

Vitruvius

Volterra

waste disposal

domestic

industrial

waqf; see also charity

water

waterways: see roads

Weberianism

women

as public health threats

as public health enforcers

Zupko, Ronald

Zurich
Acknowledgments

The dung beetle's reputation for altruism suffered a serious blow in the later nineteenth century, when pioneering entomologist Jean-Henri Fabre (1823-1915) exposed it as a myth. Fabre observed that dung beetles loitering near a species member as it struggles to move its cargo across an obstacle are more likely there to ogle a meal ticket than help a friend in need. By happy contrast, my own experience with moving documents related to dung across obstacles (and dealing with obstacles en route to documents on dung) has benefitted from genuine camaraderie. For nearly a decade of tilling this field, I have gained much from the encouragement of numerous colleagues and the material aid of several grants and institutions. Collectively they only reduced my risk of exhaustion and never, so far as I am aware, did they try to steal my food.

Among my intellectual creditors a very partial list would include Abbey Agresta, Maaike van Berkel, Sarah Blanshei, Ann Carmichael, Sam Cohn, Janna Coomans, Trevor Dean, Fritz Dross, Monica Green, John Haldon, John Henderson, Jamie Kreiner, Roos van Oosten, Claudia Rapp, Carole Rawcliffe, Greg Roberts, Gabriela Signori, Jane Stevens Crawshaw, Paul Stevenson, Jan Teurlings, Claire Weeda and Corinne Wieben. My first real foray into premodern public health took place during a graduate seminar I taught at the University of Amsterdam in 2010. I remain grateful to its participants and especially to my department for continuing to believe that enthusiastic teaching stems from serious research, and vice versa. Tertium non datur.

A number of patient audiences have been subjected to what may benignly be called my evolving thoughts on premodern healthscaping. For their helpful
and critical discussion I would like to thank the organizers and participants at 
the European Association for Urban History's conferences in Lisbon and Rome; 
the Consejo Superior de Investigaciones Científicas in Madrid; the University of 
Konstanz seminar in medieval history; the Utrecht Center for Medieval Studies; 
my fellows inmates at Villa I Tatti; Monash University's Centre for Medieval and 
Renaissance Studies; the Hong Kong University of Science and Technology; 
Chicago's consortium in medieval history; Stanford University's Center for 
Medieval and Early Modern Studies; the Stanford Humanities Center; the annual 
CARMEN meeting hosted by Gent University; the annual Trinity College, Dublin, 
and the Edward Worth Library lecture on medieval and Renaissance medicine; 
Birmingham University's Centre for the Study of the Middle Ages; and of course 
the Amsterdam Center for Medieval and Renaissance Studies, the Center for 
Urban History and the History Research Seminar, *sine quibus non*.

Earlier versions of chapter two on Lucca and chapter three on Bologna, as 
well as my preliminary thoughts on medieval public health, have appeared in 
several publications listed in the bibliography. I wish to thank the editors and 
reviewers of *History Compass, Urban History, Anuario de Estudios Medievales, The 
Far-Sighted Gaze of Capital Cities* and *A Companion to Medieval Bologna* for their 
original invitations and helpful comments, and the publishers for allowing me to 
draw on some of these materials in the present book.

Research funding has been generously provided by Dutch tax payers by 
way of the University of Amsterdam; Villa I Tatti: The Harvard Center for Italian 
Renaissance Studies; the Stanford Humanities Center; and the increasingly fewer 
European tax payers through the European Research Council (grant no. 724114). 
The dedicated staffs in the archives and libraries of Asti, Bologna, Cuneo, Ivrea,
Lucca, Nizza Monferrato, Perugia, Pinerolo, Pistoia, Turin, Viterbo and the Sovraintendenza Archivistica e Bibliografica del Piemonte e della Valle d’Aosta have provided cheerful and thoughtful support. For sharing their expertise in mapping and spatial analysis, whose results appear in chapters one and four, I would like to thank Karin Pfeffer and Marcel Heemskerk at the University of Amsterdam and Luca Scholz and Alexis Rochat at Stanford University. Francesco Poggi arranged for crucial images and texts a towards the completion of the manuscript, for which I am truly grateful. At the University of Pennsylvania Press, Ruth Mazo Karras and Jerome Singerman, alongside the press’s dedicated staff, have been a voice of reason throughout the final stages of bringing the manuscript to print, aided by the critical comments and insights of two anonymous reviewers.

I wish to avoid merely paying lip-service to the latter’s impact on this book, as sometimes happens on such occasions. For once, I would like to spell out what it meant to me that two scholars took time from their busy schedules to read this book from cover to cover (even before it had covers), in fast tempo, and offer honest and constructive advice. It reduces not an iota from my responsibility for the final text to state how grateful I am for their critical eye. In many places their remarks saved me from terrible blunders, helped make the argument more coherent and reduced its weight to what the sources could bear. They also provided me with much to chew the cud on in the future. Good peer reviewers and their parallels across the academic publishing universe continue to define collegiality, and I for one wish to see their efforts (pre- and post-publication) used to ensure quality research rather than funnel billions into conglomerate publishers’ coffers.
Finally, this book recognizes four very special people in my life. They hardly know one another, but the Latin dedication gestures above all at how each of them continues to shape my thoughts on history, culture, the urban environment and more. I consider it a great fortune to count them as my friends and mentors. Were it not for Shelly Makleff, however, I would have remained blind to the enormous role that preventative interventions play, in their presence and absence, in all life on earth. If this book helps health historians and public health professionals occasionally think outside the box of Euro-American modernity—or indeed rethink it—, it is largely thanks to her.
Notes

1 Not least among whom was the pope. As pontiffs and their entourages from at least the late twelfth century onwards stressed, Rome was an unhealthy place to occupy, especially during the summer. Hence the curia’s general scarcity throughout that season in the later Middle Ages. See Paravicini Bagliani, *Il corpo del Papa*, 257-78, who attributes the trend to the influx of the Arabic medical and natural-philosophical corpus into and from Salerno and popes’ somewhat paradoxical interest in Galenic and Hippocratic medicine henceforth. As this book argues, however, the roots of popes’ preventative relocations, much like their prophylactic interventions in Rome and elsewhere in the nascent Papal State, are more numerous, run deeper than a single intellectual revival and nourished similar strategies across and beyond the peninsula. Chapter five revisits this theme.
Schiaparelli, “Alcuni documenti degli *magistri aedificiorum urbis,*” X (21 October 1306): “Quod iuxta viam publicam quam cives Romani masculi et femine ac alii multum frequentant in visitando limina basilice principis apostolorum de Urbe...in ipsis locis vacantibus et ortis seu casarenis receptantur cotidie ex proiectu temerario, quem aliqui ibidem faciunt, multa sordita et fetida receptantur et fimus seu lotamen et alia inmundities seu spurcities, et ribaldi indifferenter fetida et turpia faciunt ibidem, propter que transmeuntes per viam ipsam non possunt sine feudore transire, et quin eos videant talia turpia facientes, ac etiam in dampnum et preijudicium seu lesion[em per]sonarum totius vicinie ac confratrum et totius familie dicti hospitalis aer corrumpitur et corrumpi potest et fieri pestiles, ex quibus omnibus supervenire possunt graves morbi” (51).

3 Scaccia Scarafoni, “L’antico statuto dei ‘Magistri stratarum’ e altri documenti relativi a quella magistratura”; Carbonetti Vendittelli, *Le più antiche carte del convento di San Sisto in Roma (905-1300),* docs. 142 (25 October 1262), 144 (5 February 1263) and 190 (16 June 1290) (287-89, 289-92 and 403, respectively); Carbonetti Vendittelli, “La curia dei *magistri edificiorum Urbis* nei secoli XIII e XIV e la sua documentazione.”


5 Nutton, “The Seeds of Disease”; Rawcliffe, *Urban Bodies,* 120-27; Stearns, *Infectious Ideas,* 91-105; Hawkins, “Sights for Sore Eyes.” Each of the following chapters will demonstrate the specific role played by these concerns in local legislation and enforcement.

6 Douglas, *Purity and Danger,* 35.
Schiaparelli, “Alcuni documenti,” X: “[E]t volumus et mandamus ipsa casalena seu loca vacantia claudi et parari taliter per hospitale predictum, quod ribaldi et alii quicumque non possint ibi intrare ad faciendum ibi aliqua turpia et fetida et aliqua mindities, seu putredo de dictis casalenis in viam publicam venire non possit” (52).

The public resolution of private disputes seems to have been especially common in Rome, ultimately underscoring the legitimacy of local governments as agents of order. See Kumhera, The Benefits of Peace, 129-30.

These are discussed in the introduction and chapter five in particular.

Davis, Periodization and Sovereignty; Symes, “When We Talk About Modernity”; Davis and Puett, “Periodization and ‘The Medieval Globe’: A Conversation.” Postmodernity, by contrast, seems to have been kinder to the Middle Ages, at least as an imagined era. See Holsinger, The Premodern Condition.

Social Stability in Early Modern Florence and the Islamic Empires.” On the office of the foreign podestà see Maire Vigueur, *I Podestà dell’Italia comunale*.


3 Rawcliffe, “The Concept of Health in Late Medieval Society.”


7 See, most recently, Crook, *Governing Systems*. Crook’s is the first monograph, to my knowledge, that recognizes the significance of Rawcliffe’s intervention from a modernist's perspective. I deal with it directly in the conclusion to this book.


9 The interrogation and integration of material sources into this picture is the key task of a new research program on medieval Italian and Low Countries urban prophylactics: [https://premodernhealthscaping.hcommons.org](https://premodernhealthscaping.hcommons.org).

10 An online resource is Geltner and Coomans, “The History of Public Health in Pre-Industrial Societies: A Bibliography.” See also chapter five.

11 Van Oosten, *De stad, het vuil en de beerput*; Thomas, “Hygiène, approvisionnement en eau et gestion hydrographique à Namur au XVème siècle”;


13 Shepard, *An Illustrated History of Health and Fitness*, 307-8. The capitalization is in the original.


16 Ewert, “Water, Public Hygiene and Fire Control in Medieval Towns,” 244 and 245, respectively. The sentiment is shared, albeit in underscoring the positive material outcomes of the so-called Malthusian trap, by Clark, *A Farewell to Alms*, 6 and 27.

17 The nexus is brilliantly exploited throughout *Monty Python and the Holy Grail* (1975) and its 2004 spinoff *Spamalot*, to name the most celebrated twist on this theme. On the self-congratulatory and politically motivated nexus of secularization and modernity see Davis, *Periodization and Sovereignty*, especially part II. I return to this theme in chapter one.

18 Berridge, Gorsky and Mold, *Public Health in History*, 26. The paradigm has been successfully absorbed by at least one Korean medical historian, who speaks for many of his co-contributors to a volume on Asian and Pacific public health history in averring that “public health is a relatively modern concept, and it was the modern state that began to realize its importance in maintaining social stability.” Yeo, “A History of Public Health in Korea,” 73. See also chapter five.
19 Hannaway, “From Private Hygiene to Public Health,” 111.


21 This is the title of the first chapter of Rawcliffe, Urban Bodies.


23 Sand, The Advance to Social Medicine, 145. Sand’s approach to the European Middle Ages specifically is rather mixed. See ibid., 149-53.


25 The rebuttal was famously articulated by McKeown, The Rise of Modern Population. And see McKeown, The Role of Medicine.

26 They too were rejecting earlier evaluations of Antiquity and especially of the Middle Ages as a uniquely backwards period. See for instance, Winslow, The Evolution and Significance of the Modern Public Health Campaign.

27 Porter, Health, Civilization and the State, 3.

28 Porter, Health, Civilization and the State, 9-61. Medieval lepers’ reputation as a moral danger by default is unwarranted. See Rawcliffe, Leprosy in Medieval England; Touati, Maladie et société au Moyen Âge.

29 On the distinctions between and methodological implications of an emic/etic divide see, most recently, Headland, Pike and Harris, Emics and Etics.

30 The southern peninsula was the seat of major cities in this period, including Naples and (if one may cast a slightly wider net) Palermo, as well as numerous smaller towns, all of which faced and dealt with health-related challenges. However, due partly to the destruction of local archives and partly to modern-day regionalism, southern cities tend to be studied separately from their
northern counterparts. Putting aside modern national constructs, the situation is lamentable, even ironic when it comes for example to Salerno, which was home to a major medical school. Although it is not a problem the present book seeks directly to address, its conclusions may help broaden the scope of local public health historiography, which seems to remain focused (as elsewhere) on the rise of health boards and professional medical literature on plague.


32 Foucault, “Governmentality” (based on a lecture originally delivered in 1978); Murray Li, “Governmentality”; Walter, *Governmentality: Critical Encounters*.

33 Rose, O’Malley and Valverde, “Governmentality,” 84.

34 Foucault, “The Birth of Biopolitics,” 73. And see Dean, *Governmentality*, 98-112.


36 Rabinow and Rose, “Thoughts on the Concept of Biopower Today,” 14.

37 Rabinow and Rose, “Thoughts on the Concept of Biopower Today,” 28. The same holds for the fight against the outbreak of Ebola in 2014.

38 See, most recently, Gall, Lautenschlager and Bagheri, “Quarantine as a Public Health Measure.”

39 In mid 2017, a search for the terms “biopower” and “biopolitics” (including in their hyphenated versions) on the International Medieval Bibliography database yielded two results, neither of which had to do with public or communal health. That is not to say that medievalists have ignored governmentality altogether, yet these tend to be political, social and religious historians interested in technologies of power. See, for instance, Heullant-Donat, Claustre and Lusset, *Enfermements: le cloître et la prison*.
See, for instance, the essays in Porter, *The History of Public Health and the Modern State*.


McCleery, “Medical Licensing in Late Medieval Portugal,” 212-19.

Varlik, *Plague and Empire*, 249.

Dean, *Governmentality*, 73. A different angle of criticism is that territory itself entered the political vocabulary at a much later stage, although the evidence here is more ambiguous. See Elden, *The Birth of Territory*, 212-78.

Rose, *Powers of Freedom*.

The term medical pluralism is usually employed in the context of an encounter between imposed or willingly imported Western biomedicine and indigenous healing and preventative practices. As such it is usually limited to (early) modernity. See Good, “Medical Pluralism.” Here, however, I use the term to describe the variety of often-overlapping medical authorities and practices within relatively homogenous communities, following Gentilcore, “Medical Pluralism and the Medical Marketplace in Early Modern Italy.” On medical literacy in the traditional sense see below.

Farley and Cohen, * Prescription for a Health Nation*. An earlier instance of the term’s use is Hutton and Richardson, “Healthscapes,” which however employs the term in the restricted sense of a medical clinic.

Tulane University’s Prevention Research Center continues to be a major proponent of the term “healthscaping”:

In a private communication (25 July 2015), Farley reported that the term probably reflects the amount of time he spent those days working in his garden. His enthusiasm did not persuade his publisher, however, who presently relegated the neologism from the book’s proposed title to a chapter heading.

Healthscaping fared even worse in the title negotiations for this volume.

The most virulent critique in this vein can be traced back to McKeown, *The Role of Medicine*, although it was of course a Galenic principle.


Thaler and Sunstein, *Nudge*. Addressing the root social causes of ill-health, Marmot, *The Health Gap*, 1, takes preventative healthcare a step further, poignantly asking: “Why treat people and send them back to the conditions that made them sick?”


The foremost proponent of the latter method is Jacobs, *The Death and Life of Great American Cities*, arguing specifically against a strict segregation of cities into mono-functional zones.


For a discussion see Keane, “Critiques of Harm Reduction, Morality and the Promise of Human Rights.”


Rawcliffe and Weeda, *Policing the Environment in Premodern Europe*.

Habermas, *The Structural Transformations of the Public Sphere*; Crossley and Roberts, *After Habermas: New Perspectives on the Public Sphere*; Symes, *A Common Stage*.

Lefebvre, *The Production of Space*.

Coomans, “In Pursuit of a Healthy City.”

Hoffmann, “Footprint Metaphor and Metabolic Realities.” See also Heynan, Kaika and SWyngedouw, *In the Nature of Cities*.

Van Oosten, *De stad, het vuil en de beerput*, 49-99.

Hyde, “Medieval Descriptions of Cities”; Fasoli, “La coscienza civica nelle ‘Laudes civitatum’.”

Lefebvre, “The Specificity of the City.”

A recent challenge is Aberth, *An Environmental History of the Middle Ages*.


Latour, *Reassembling the Social*. For an object-lesson article, see Dugdale, “Materiality: Juggling Sameness and Difference.” A defining essay on the material turn among historians is Auslander, “Beyond Words.”


Although the present study is less interested in the relations between urbanism and capitalism per se, ANT and Science and Technology Studies (STS),
from which the former emerged, certainly provide a fruitful path for studying them. See De Munck, “Re-Assembling Actor-Network Theory and Urban History.”

75 De Certeau, *The Practice of Everyday Life*, 95.

76 Scott, *Weapons of the Weak*. Scott and De Certeau do not seem to have been aware of one another’s work when publishing their respective studies.

77 Bhabha, *The Location of Culture*, 245-82.

78 Bakhtin, *Rabelais and His World*.

79 Goodson, Lester and Symes, *Cities, Texts and Social Networks*.


81 Forrest, “The Politics of Burial in Late Medieval Hereford,” 1125. The observation is strongly echoed in Mengel, “A Plague on Bohemia?”


84 For a recent overview see Krause and Pääbo, “Genetic Time Travel.”


86 The few scholars of Europe who are explicitly critical of ameliorist narratives in public health history include Van Oosten, *De stad, het vuil en de beerput*; and Deligne, “De langetermijngeschiedenis van het afvalbeheer en de watervervuiling.” By contrast, resistance to the myth of modernity and the silver
lining to imperialism and colonialism nearly defines post-colonial studies. See Ngalmulume, "Keeping the City Totally Clean"; and chapter five below.

87 Cosmacini, Storia della medicina e della sanità in Italia, 35; See also Mazzi, “Per la preservatione et bene universale.”


89 Bayless, Sin and Filth in Medieval Culture, 41. See also Dumas, Santé et société à Montpellier à la fin du Moyen Âge; Blažina and Blažina Tomić, Expelling the Plague.

90 See Gall, Lautenschlager and Bagheri, “Quarantine as a Public Health Measure against an Emerging Infectious Disease,” 8.

91 Naso, Medici e strutture sanitarie, 56-57 (on Black Death) and 63-73 (on health boards).

92 Nicoud, “‘Attendere con altro studio et diligentia a la conservatione et salute de la cita’”; Nicoud, "Médecine, prévention et santé publique en Italie à la fin du moyen âge.”

93 The rather substantial delay is not lost on Carmichael, “Plague Legislation.”

94 Dumas, Santé et société à Montpellier, 250-76; Bowers, Plague and Public Health in Early Modern Seville.

95 Cipolla, Cristofano and the Plague, 118-19.

96 Lindemann, Medicine and Society in Early Modern Europe, 159. See also Henderson, “Public Health, Pollution and the Problem of Waste Disposal in Early Modern Tuscany”; Henderson, “‘Filth is the Mother of Corruption’: Plague, the Poor and the Environment in Early Modern Florence.” Tuchman, A Distant
Mirror, 107, likewise thought that it was not the absence of public hygiene policies or infrastructure that blew wind in the plague's sails, but rather their temporary collapse and neglect by urban populations. However, she mischaracterizes (101-2) medical experts as totally reliant upon “astral influences,” at the expense of miasma and intromission theory, a bias that to her mind undermined preventative efforts.


98 Porter, Health, Civilization and the State, 31. See, by contrast, Little, Plague and the End of Antiquity; Rosen, Justinian’s Flea.

99 Pucci, L’alluvione dell’Arno nel 1333, 44-63.

1 Jacobs, The Death and Life of Great American Cities; Appleyard, Livable Streets; Rudofsky, Streets for People; Duneier, Sidewalk; Moudon, Public Streets for Public Use; Loukaitou-Sideris and Ehrenfeucht, Sidewalks; Heng, Liang and Limin, On Asian Streets and Public Space.


3 Leguay, La rue au Moyen Age, 53-63.

4 Bocchi, “Regulation of the Urban Environment by the Italian Communes from the Twelfth to the Fourteenth Century”; Bocchi, “Regolamenti urbanistici, spazi pubblici, disposizioni antinquinamento e per l’igiene”; Bocchi, Attraverso le città italiane nel Medioevo, 107-27; Balestracci, “The Regulation of Public Health in Italian Medieval Towns”; Greci, “Il problema dello smaltimento dei rifiuti nei
centri urbani dell’Italia medievale”; Szabò, “La politica stradale dei comuni medievali italiani.”

5 Biller, *The Measure of Multitude*, 218-26; Campopiano, “Rural Communities, Land Clearance and Water Management in the Po Valley.” See also the introduction. The rural dimension of this argument is developed especially in chapter four.

6 The observation has been made frequently in the context of modernity. See Porter, *The History of Public Health and the Modern State*. On the public good in the medieval urban context, see Lecuppre-Desjardin and Van Bruaene, *De Bono Communi*.

7 Wickham, *Sleepwalking into a New World*.

8 Jones, *The Italian City-State*.


10 Thus Siena, Milan, Venice and Florence are intentionally underrepresented, although their public health historians’ insights remain invaluable. See Carabellese, *La peste del 1348 e le condizioni della sanità pubblica in Toscana*;
Balestracci and Piccinni, *Siena nel Trecento*, 41-62; Mucciarelli et al., *Vergognosa immunditia*; La Cava, *Igiene e sanità negli statuti di Milano del secolo XIV*; Nicoud, “‘Attendere con altro studio et diligentia a la conservatione et salute de la cita’”;

11 Zupko and Laures, *Straws in the Wind*. The latter’s sources were entirely exclude given their relevance or else to achieve a modicum of geographical distribution.

12 For the observation’s relevance in and beyond Italy see Chittolini and Willoweit, *Statuti, città, territori in Italia e Germania tra medioevo ed età moderna*.

13 On court documents’ capacity to communicate and pursue an institutional agenda see Frans Camphuysen, *Scripting Justice*, esp. ch. 4.

14 The literature on this topic is immense. For a recent survey see Parker, *Urban Theory and the Urban Experience*. A collection dealing directly with architecture straddling the private and public spheres in the Middle Ages is Alexandre-Bidon, Piponnier and Poisson, *Cadre de vie et manières d’habiter (XIIe-XVIe siècle)*. For a recent illustration on the disciplining gaze through and into domestic windows in medieval London, see Rees Jones, “The Word on the Street.”

15 Goldwhaite, “The Florentine Palace as Domestic Architecture.”

16 Sori, *La città e i rifiuti*, 45-49.

17 Alberti, *On the Art of Building*, 4:7 (67-68). And see ibid., 10:6 (114), where the author calls stagnant waters “unhealthy and pestilential.”

18 Sabbionesi, “‘Pro maiore sanitate hominum civitatis…et borgorum’.”

19 Biow, *The Culture of Cleanliness in Renaissance Italy*, 75.
Antonelli, *Statuti di Spoleto del 1296*, Breve populi XXV, LXI (40 and 55, respectively).


Camerani Marri, *Statuti dei comuni di Castelfranco di Sopra (1394)*, II, XLIII (95). Commenting on similar promulgations from early modern Britain, Skelton, *Sanitation in Urban Britain*, 25, insightfully argues that allowing residents to empty their chamber pot from the window at night is itself a preventative measure, given the risks of descending rickety external stairways at night on the one hand, and keeping polluting material at home on the other.

Morandi, *Statuto del Comune di Montepulciano (1337)*, IV, CXX (367).


Bayless, *Sin and Filth in Medieval Culture*.

“Statuto de Aspra del MCCCLXXXVII,” III, CLXX: “acconcila talmente che non faccia ingiuria a casa de alcuna persona et al’ huomini et persone stanti in le vie publiche et piaze” (485).

Ortalli, Parolin and Pozza, Statuti di Cittadella del secolo XIV, II, 42: “Locus privatus sive necessarius, in quo emituntur descendencia de corpore humano, est valde utilis, maxime iuxta terras et fortilicias, ubi est multitudo hominum gencium; et ideo volumus quod quilibet persona habitans intra terram Cittadelle vel extra, in burgis vel alibi, ubi sit copia vicinorum, teneatur et debeat habere in circumstanciis domus sue habiotacionis vel cassamenti unum locum necessarium, bene defossum et bene cohopertum super terram iuxta eam, tali modo et forma quod nullus inde transiens vel ibi habitans senciat aliquam putredinem immensam vel ineptam, sub pena librarum trium denariorum parvorum pro quolibet et qualibet vice et reaptandi statim dictum opus; et quicumque teneatur habere et tenere dictum locum longe a confinibus vicini saltim per tres pedes partice, sub pena predicta, nisi dictus locus esset lapidibus revolutus, et qualibet bone fame possit acusare cum sacramento, et ei creditur et habeat tercium banni” (127-28).

Van Oosten, De stad, het vuil en de beerput.

Strohm, “Sovereignty and Sewage”; Bayless, Sin and Filth in Medieval Culture; And, more broadly, Douglas, Purity and Danger; Strasser, Waste and Want.

Berti and Mantovani, Statuti di Figline, 1408, XII, XVI-XVIII, XXVI, XXXIII, CXV (9, 12-13, 15-16, 18, 61, respectively).

Gullino, Gli Statuti di Dronero (1478), 268, 272, 387, 388, and 400 (157, 158, 191, and 194, respectively).

See Ervynck et al., “An Investigation into the Transition from Forest Dwelling Pigs to Farm Animals.” See also Kreiner, “Pigs in the Flesh and Fisc.”

Zdekauer, Statutum Potestatis Comunis Pistorii (1296), I, LXX: “Ordinamus quod eligantur in civitate Pistorii per camerlingos communis iiiij.or homines, unus
pro porta, qui sint vetturales, qui teneantur, scilicet quilibet in sua porta,
recolligere lapides per vias publicas et ipsas vias de lapidibus mundare et
purgare et ipsos lapides asportare de ipsis viis, ad hoc, ut pueri non habeant
lapides paratos ad se percutiendos et ut equi non offendantur a lapidibus,
quando currunt, nec persone stantes ad videndum currere ipsos equos. Et habeat
quilibet eorum in sex mensibus a comuni sol. viginti f. p.” (41).

38 Ciampoli and Turrini, Statuti medievali e moderni del Comune di Trequanda,
1369, III, 52 (76).

39 Camerani, Statuti dei comuni di Castelfranco di Sopra (1394), I, XXVIII (54-55).

40 Mangini, Statuta civitatis et episcopatus Cumarum (1458), LXXXVIII: “salvo
quod non fiat prejudicium vicinis in aliis operibus” (151).

41 Prunai, Statuti dei comuni di Monastero S. Eugenio (1352), VII (38).

42 Galassi, Gli statuti medievali di Fossato, CCXIII and CCXVIII (201 and 203,
respectively).

43 Storti Storchi, Lo statuto de Bergamo del 1331, IV, II (98-99). And see
Forgiarini, Lo statuto di Bergamo del 1353, I, XXV; III, XIII-XV; VII, XV and XX; IX,
XV (48, 108-10, 145-56, 301-21, respectively).

44 Camilla, Corpus Statutorum Comunis Cunei 1380, cc. 352-63 (186-91). Archivio
Storico Comunale di Cuneo, Ordinati 1, fols. 2r and 3r (25 November 1362) and
66r (10 September 1363) record the election of massarii viarum to expand and
fix several roads, but it is unclear if these are routine or ad hoc appointments.

45 Andreolli et al., Statuti de Ala e di Avio del secolo XV, I, 71 (109).

46 Zdekauer, Statutum Potestatis Comunis Pistorii (1296), III, CLXII: “Quoniam
civile est et expedit pro salute hominum conservanda quod civitas Pistorii sit
purgata fetoribus, ex quibus aer corumpitur et pestilentiales egretudines oriunt;
ideo hac lege sancimus, quod nullus artifex possit vel debeat exercere vel facere infra muros vel circulas civitatis Pistorii aliquam artem vel aliquid laborerium, unde fetor oriatur, sed debeat talem artem et laborerium, exercere extra muros et circulas civitatis, in locis, unde fetor venire non possit civibus Pistoriensibus. Et quod nulla putredo, de qua fetor resultet, teneatur in aliqua apotecha seu proiciatur in aliquam viam publicam intra circulas civitatis” (150-51).


48 Pittarello, Statuti di Padova di Età Carrarese, III, X (446).

49 Clementi, Statuta Civitatis Aquile, 1315, 269 and 271 (182). On tanning, including its use of dung, lime and alum, see Waterer, “Tanning.”

50 Caggese, Statuti della Repubblica Fiorentina, Podestà III, LII: “Ad purgandum civitatem Florentie a fotoribus ex quibus aer corrumpitur, propter quod infirmitates insurgunt atque perveniunt, statutum et ordinatum est quod nullus tintor vel aliqua alia persona audeat vel presummat prohicere vel prohici facere vel tenere in viis publicis vel in foveis civitatis vel in aliiis foveis in civitate Florentie non copertis aquam putridam vel non claram vel aquam de tincta vel herbam aliquam extractam de caldariis vel de cippis tinctorum, cuiuscumque generis sit herbarum ad tinctam, vel derivare per vias publicas vel per aliqua loca non coperta, sed ipsum talem aquam ipsi tinctores et quilibet alius teneantur
Carabellese, *La peste del 1348*, who was the first to study these and other Florentine hygienic statutes, insisted that they originated in the (now lost) thirteenth-century statutes.

51 Morandi, *Statuto del Comune di Montepulciano* (1337), IV, CLVIII (385).


54 Berti and Mantovani, *Statuti di Figline*, 1408, XV (11).


And see Gunzburg, “The Perugia Fountain.”

57 Clementi, *Statuta Civitatis Aquile*, 1315, 93 and 255 (77-78 and 175, respectively).

58 Bologna, *La Fontana della Rivera all’Aquila*.

59 Antonelli, *Statuti di Spoleto del 1296*, XI; XII; XXII (12 and 15, respectively).

60 Andreani, “Un frammento di statuto del commune di Orvieto (1313-1315),” 31 (151). Pertinent officers, such as the *custodes fontium* and *custodes bonorum exteriorum*, are recorded even earlier. See Archivio di Stato di Orvieto,

Giudiziario, Podestà, Capitano del Popolo e Vicario, 1 (1287-1289), fols. 1r-3v, 9r, 18v-26v, 59r, 62v. And see ibid., fol. 2, 75r for two men and two women charged by these guards of washing their hands in a fountain near Santo Stefano. The city council’s deliberations likewise attest ad hoc appointments of numerous local *sporastantes pontium, fontium et viarum* from the late thirteenth century. See Riformagioni 69 (1295), fols. 13v, 14r, 20v-21r, 25r, 51r, 70v-71r; 134 (1347),
Bianchi and Granuzzo, "Statuti di Verona del 1327", IV, I, CVIII-CX; V, V (539-41, 591, 629, respectively).

Casini, "Statuto del Comune di S. Maria a Monte (1391)", IC (133).

Mosca, "Gli antichi Statuti di Bra", MCDLXI, LXXXVI (161).

Govaerts, "Mosasaurs," chs. 1 and 4. And see Menchetti, "Gli statuti di Montalboddo dell’anno M.CCC.LXVJ.

Taddei, "Gioco d’azzardo, ribaldi e baratteria," 342. On dung’s role in identity formation see also Jones, "Manure and the Medieval Social Order." Parallels to such professions and processes of marginalization in other regions are briefly discussed in chapter five.

Balestracci and Piccinni, Siena nel Trecento, 45; Rocchigiani, "Urbanistica ed igiene negli statuti senesi." And see Giovanni da Viterbo, Liber de regimine civitatum, 46, 57 and 108 (231, 234, 256, respectively). The apparent confusion between streets and piazzas has been recently explained by Dey, "From 'Street' to 'Piazza' ."

Of the 118 cities covered by the 154 statute collections studied here, 84 (71%) designated viarii and their administrative parallels by the late fifteenth century.

The apparent “viarification” of the camparius is better documented for Piedmont and will accordingly be discussed in chapter four.

The literature on the revival of both legal and medical studies is immense. On the former see Brundage, The Medieval Origins of the Legal Profession, ch. 4. Key works concerning the latter include Kristeller, Studi sulla scuola medica salernitana; and Jacquart and Paravicini Bagliani, La Scuola Medica Salernitana.
For studies of potential implications for medieval public wellbeing see Bannon, “Fresh Water in Roman Law: Rights and Policy.”

Paravicini Bagliani, *Il corpo del Papa*, 257-78; and chapter five below. That is not to argue that the revival was bereft of social or clinical implications. See, for instance, García-Ballester, *Practical Medicine from Salerno to the Black Death*.

Skinner, *Health and Medicine in Early Medieval Southern Italy*, 22-39. This is of course not to mention medical care, curative practices and the copying and composition of medical texts, which are the focus of Skinner’s volume. See also chapter five of this book.

Plesner, *Una rivoluzione stradale del Dugento*; Szabò, “La politica stradale dei comuni medievali italiani.”


Liberali, *Gli Statuti del Comune di Treviso*, 1207-1218, XLIX and CV (1:45 and 72, respectively).


Pittarello, *Statuti di Padova di Età Carrarese*, I and II (99 and 96, respectively).


Scott, *Seeing Like a State*, 53-83.

Detailed programs for upkeep and development were commonly decided upon by a city’s general council and were thus handed down to the *viarius*, by way of
the podestà, with specified spatial boundaries and timelines. Such texts occasionally comprise the final book or a major section of a new set of statutes. See, for instance, Andreani, “Gli statuti trecenteschi di Amelia,” 248-73 (497-506); Galassi, Gli statuti medievali di Fossato, CXII-CXLVI (162-70); and SBo35, X, 1-102 (921-1002).

84 Caprioli, Statuto del comune di Perugia del 1279, 11 and 171-74 (1:17 and 180-90, respectively). The structure appears to have remained intact during the composition of the 1342 vernacular redaction of the statutes. See Elsheikh, Statuto del comune e del popolo di Perugia del 1342, I, 13.20, 13.22 (1:50-52).

85 Ciampoli and Turrini, Statuti medievali e moderni del Comune di Trequanda, 1369, I (91).

86 Carbonetti Vendittelli, “La curia dei magistri edificiorum Urbis nei secoli XIII e XIV e la sua documentazione,” 25-32 and Appendix 1, nos. 4, 12, 15, 16, 20, 22 and 28. See also Scaccia Scarafoni, “L’antico statuto dei ‘Magistri stratarum’.”

87 Pene-Vidari, Statuti del Comune di Ivrea, 1329, LVI (1:201-2).

88 Ninci, Statuta antiqua communis Collis Vallis Else, 1341, XXXV (1:266-67).

89 Caprioli, Lo Statuto della Città di Rieti, 1350, III, 32 (204).

90 Forgiarini, Lo statuto di Bergamo del 1353, Collatio IX, XV (304).

91 Pistoia and Fusaro, Statuti di Feltre, 1388-90, III, 80 (168-70).

92 Bellandi et al., Statuti della Lega del Borgo a San Lorenzo di Mugello, 1374, 9 (19-20). On the construction of bridges as charitable works, often aimed at aiding pilgrims, see Brodman, Charity and Religion in Medieval Europe, 121-24.

93 “Statuto di Viterbo,” 1237-1238, CCCCXVIII, CCLI-LIV, CCLVI, CCLVIII, CCCL (59-61 and 86, respectively); 1251-1252, I, XXXVII-VIII, LXXXVII, CX (113-14, 129 and 247, respectively). Viarrii and fontanarii are absent from the modern
edition of Viterbo’s highly fragmented 1356 statutes (published along with the previous texts), but they highly likely were included in it. The 1469 redaction, at any rate, does discuss them in very similar terms to the original rubric. See Buzzi, *Lo statuto del Comune di Viterbo del 1469*, 33 (60-62).


96 Fugazza, *Lo statuto di Piacenza del 1323*, IV, VIII-VIII and XXVI (73-74 and 79, respectively).

97 Morandi, *Statuto del Comune di Montepulciano (1337)*, I, VIII: “Qui notarius sit offitialis et hebeat offitium super omnibus stratis, viis publicis vel privatis, pontibus, fontibus, fluminibus, rivis, fossatis, puteis, claveis, citernis, abeveratoriiis, lavanderiiis et super aliis quibuscumque laboreris et actationibus et reparationibus necessariis terre Montispolçani et eius districtus et tam in procedendo quam in condennando, seu multando habeat totum offitium, quod habeat dominus sindicus seu eius notarius” (10-11).

98 Morandi, *Statuto del Comune di Montepulciano (1337)*, III, CXVIII (240-41).

99 Morandi, *Statuto del Comune di Montepulciano (1337)*, IV, CXIII: “unde ad aliquam viam publicam vel vicinalem fetor deveniat vel devenire possit” (365).

100 *Liber statutorum Vitellianæ*, 144 (111).


102 Pieri, *Lo statuto di Vellano del 1367*, 83-84. And see ibid., 146-47.

103 Prunai, *Statuti dei comuni di Monastero S. Eugenio (1352), Monteriggioni (1380) e Sovicille (1383)*, Sovicille, 1383, IV, I and II (197-98).


106 Camerani Marri, *Statuti dei comuni di Castelfranco di Sopra (1394) e Castiglione degli Ubertini (1397)*, Castiglione degli Ubertini, 1397, 5 (177-79; 197).

107 “...stratas, vias, pontes et fontes existentes in eorum populis et aliis locis per que homines dictorum populorum traneunt eundo et redeundo ad civitatem Florentie.” “Statuta legarum Ghiaceti, Montis Lauri, et Rignani (1402),” XXXV, in Benigni and Berti, *Statuti del Ponte a Sieve*, 35-68 at 61-62.


109 Mirto, *Statuti di Settimo*, 1409, IV; and additions from 1422 (37, 89 and 94-95).

110 Affolter and Soffici, *Statuti di Montevettolini*, 1410, I, III and XV (48 and 51, respectively).


112 Pene-Vidari, *Statuti del Comune di Ivrea*, 1329, XIII (1:285). A similar division of labor is documented for elsewhere in Piedmont, as discussed in chapter four.


114 Cecchi, *Gli Statuti di Sefro (1423), Fiastra (1436), Serrapetrona (1473), Camporotondo (1475)*, IV, XXXII (232-33). See also Camporotondo, I, XX (ibid., 467).


Gullino, *Gli statuti di Saluzzo (1480)*, 236, 243, 381 (179, 182-83, 239, respectively).

“Statuto di Tivoli del MCCCCV,” I, II (154).

“Statuto di Ripi del MCCCXXXI,” LII (120).

Gioacchini, *Statuti della città di Orte*, IV, 90 (230-32). The manuscript dates to 1586 but the editor claims it is based on a late fourteenth-century text.


Zdekauer, *Statutum Potestatis Comunis Pistorii (1296)*, V, XXIII: “qui vadunt cum uno ex notariis potestatis...ad videndum stratas et vías publicas extra civitatem per districtum Pistorii” (276).

Casini, *Statuto del Comune di Montopoli (1360)*, I, 14: “provisoires viarum, sciarorum et foearum comunis...Qui teneantur providere vias, sciaros, foereas et foereos plani et montium comunis, et eas omnes facere reactari, relevati et micti et relassati, evacurari, exgonbrari ac etiam exoccupari...et de novo foereas micti et fieri facere” (76-77).

Casini, *Statuto del Comune di Montopoli (1360)*, III, 90: “teneatur pontes, vias et quoscumque gressus comunis predicti facere reactari una cum officialibus dicti” (271).
See chapter four.

Caprioli, *Lo Statuto della Città di Rieti*, 1350, 4, 28 and 33 (301 and 303, respectively).

Andreani, Civili and Nanni, “Gli statuti trecenteschi di Amelia”: “Vectalia vel animalia mortua, vel carnes sanguinolentas, stercora, capillos, aquam scotavatam, aquam olivarum, çoçuram vel urinam, terraplenum, lapides vel ingomaramentum aliquod, vel imunditiam vel quodque alia turpia vel eorum aliquod qui fecerit, tenuerit vel posuerit vel poni fecerit vel coria cruda iridens, extendens vel transcinans, seu aliam pelles ungens in aliqua platea comunis vel viis publicis, vel in arcu vel domo alterius, prope ecclesias seu religiosa loca, seu prope ipsa religiosa loca rumorem tantum vel lasciviam fecerit, ad penam X soldorum pro quolibet et vice qualibet teneatur; et salvo quod ungnere et tingenere quilibet possit ubilibet preter quam in Platea Veteri, in platea Sancte Marie, in platea Crucis Burgi cianciam olivarum ardens seu guatum macinans vel horum aliquod facines in platea X soldos, in alio loco predictorum V soldos comuni Amelie vice qualibet solvat pro banno, et ea prorsus debeat elevare. Et qualibet possit contrafacientes accusare et denumptiare; et eius accuses sacramento credatur; salvo quod litamen et terraplenum possit ibidem proici, si sequenti die elevatur, alias punitur ut supra; et etiam salvo beneficis edificandi in capitulo de officio viarum. Et quicumque in casaleno Sancti Laurentii de Uricheto et de Orvestulo vel prope monasterium Sancti Stefani vel in casaleno Sancti Proculi vel Sancti Nicolai vel eorum alio terraplenum vel immunditiam proiecerit vel proici fecerit, solvat pro banno comuni vice qualibet V soldos; terraplenum autem predictum, proiectum prope monasteria predicta, elevetur inde per homines contrate Platee et adiacentes contrate Pusterule. Et notarius
dapnorum datorum predictus omni die in sero more solito bandiri facit quod, sequenti die ante vespertas, quilibet omnia ante domum suam purget et mundet et omni ingommaro et inmunditia extra terram eamdem penitus portare faciat ad penam predictam. Et notarius predictus, elapso dicto termino, debeat ire videndo die termini predicta; et inobedientes scribere et punire secundum formam statuti predicti et secundum formam capituli viarum. Et de singulis earum dictus notarius inquirat, ad petitionem cuiuscumque in credentiam retinendo” (728-29).

131 Dani, *Il Comune medievale di Piancastagnaio e i suoi statuti*, 1416/1432, I, XXX: “sieno tenuti...a vedere et rivedere ogne e ciascuna via, fonti et ponti nel castello di Piano et borghy et distrecto di Piano et quelli et quelle che vedranno abisognare alcuno bisogno...dire o denunciare al Podestà” (17-18).

132 Lo Conte and Vannucchi, *Lo Statuto di Massa e Cozzile del 1420*, I, 11; IV, 8, 20, 21, 26 (32-34, 76, 80-81, respectively).


134 Prunai, *Statuti dei comuni di Monastero S. Eugenio (1352), Monteriggioni (1380) e Sovicille (1383)*, Monterggioni 1380, I, VIII (61-62).


136 Antonelli, *Statuti di Spoleto del 1296*, XII; XIII; XXII (67 and 69, respectively).


139 Moriani Antonelli, *Statuto di Spoleto del 1347*, Additiones II (1364), 16 (283-84).
Gioacchini, *Statuti della città di Orte*, IV, 90 (230-32). The text here dates to 1586 but according to the editor it preserves much of the late fourteenth-century redaction.


Camerani Marri, *Statuti dei comuni di Castelfranco di Sopra (1394)*, I, XII and XXVIII (33 and 54-55).


Moriani Antonelli, *Statuto di Spoleto del 1347*, II, 90 (142).

Nutton, “Continuity or Rediscovery? The City Physician in Classical Antiquity and Mediaeval Italy”; Park, *Doctors and Medicine in Early Renaissance Florence*; Thorndike, “A Pest Tractate before the Black Death.”


Horden, “Ritual and Public Health in the Early Medieval City.”


Cavallo and Storey, *Health Living in Late Renaissance Italy*.


Judging by a later essay, the author seems to have modified her view, giving Black Death a catalyzing role in some cases, but maintaining that earlier legislation on public cleanliness was rarely enforced. See Mazzi, “Per la preservatione et bene universale.”


Baroni and Berti, *Spazio alla vita*, 26. What “everything” is in this context is never really spelled out, but presumably it meant the secondary literature.

Zupko and Laures, *Straws in the Wind*. By contrast, Petaros et al., “Public Health Problems in the Medieval Statutes of Croatian Adriatic Coastal Towns,” which sets up its subject matter as an extension of Italian practices, is more upbeat about laws’ impact.


Mazzarosa, *Storia di Lucca dalla sua origine fino al MDCCXIV*, 1:233-34, construed Lucca’s liberation from under Pisan rule in 1369 as an occasion for the city’s comprehensive political as well as physical clean up: an evocative parallel,
to be sure, but likely confined to a literary topos. Martinelli, “Igiene pubblica,” 120, strikes a similarly positive note, albeit based solely on a normative source.


4 “Statutum viarum Lucani Civitatis,” in ASLu, CVP 1, fol. 2v.

5 Bongi, *Inventario del R. Archivio di Stato in Lucca*, 1:299; Corsi, *Statuti urbanistici medievali di Lucca*, 15-20, which also demonstrates how the offices were intermittently intertwined even before the *viarius* was subsumed by the *fondaco*.

6 ASLu, CVP 1, fols. 1r-11v. It is however not the earliest register in the extant series, which would be volume 4, dating to 1329.

7 Corsi, *Statuti urbanistici medievali di Lucca*, 43-64. Corsi traces the institutional history of the organ up to the early modern era.

8 De Stefani, “Frammento inedito degli statuti di Lucca del 1224 e del 1232”; Mancini, “I frammenti dei Constituti lucchesi del MCCLXI.” Given how common references to health and safety are in virtually every other statute collection, as chapter one discusses, their absence from these redactions is more likely connected to their fragmentary survival rather than the original composition.


10 Bongi, *Statuto del Comune di Lucca dell’anno MCCCCVIII*, 221.

11 ASLu, Statuti 3 (1321), V, xii: “De bestiis malo morbo mortuis non vendendis: Item ordinamus pro bono et salute totius Lucani communis ad evitandum dubium omne et periculum quod evenire posset propter carnes malatas et bestias que malo morbo moriunt, quod nullus tabernarius vel alia persona
civitatis Lucani, burgorum et suburgorum aut Lucani destrectus possit occidere pro vendendo nec mortuum vendere palam vel absconse alios boves, vacchas, becchos, capras aut alias bestias que cum malo morbo sepe mori convenerant nisi primo bestie ille sint provise et adiudicate pro sanis et sine periculo vendente per quattuor homines bonos et legales eligando per anthianos qui habebant illud feudum et salarium” (205-6).

12 ASLu, Statuti 3, V, xlviii (243).
14 ASLu, Statuti 3, V, lx (253-54).
15 ASLu, Statuti 3, V, lxii (255-56).
16 ASLu, Statuti 3, V, li: “Item quod nulla persona proiceat, ponat vel mictat vel proici, porri vel micti faciat vel labi vel derivari patiatur de sua domo propria vel conducta vel in qua partem habeat vel perticellum in via publica [246] vel vicinali per quam vulgo iter fiat in civitate, burgis vel suburgis de die vel de nocte vel in putheum aliquam fecem vel coagulam vel pactumen vel aliqua alia putrida vel fetida vel inhonesta vel sanguinem vel aqua mixta in sanguine” (245-46).
17 ASLu, Statuti 3, V, li: “Et quas penas patiatur et solvat pater pro filio, tutor pro pupillo de bonis pupilli et vir pro uxore, frater pro fratre, non diviso dominus vel domina pro famulo vel famulus de feudo ipsorum” (246).
18 ASLu, Statuti 3, V, liii (248).
19 ASLu, Statuti 3, V, liii: “Et quod classi omnes in civitate ubi aque putride vel alie res putride et fastiose ab hominibus ibi circumstantibus et ab aliis personis ubi prohicerant claudantur et murentur usque ad altitudinem brachiorum quatuor ad minus, ita quo homines predicta non videant, relinquendo columbare sive locum in ipsa clausura seu muro unde et per quem seu quod ad predictam
derivantur et labuntur in quemdam putheum factum quod ius habentes in ipso classo et ipsum classum vel in via publica iuxta ipsum columbare eorum expensis fieri facere toneantur [247] et ipsum putheum coperire et copertum tenere cum bonis fortibus et sufficientibus palestatits, ita quod homines currus et bestie ire et stare possint et sine lesione. Et quod alie persone que in ipsis classis ius non habent seu haberent non possint res putridas in eis proicere” (246-47).

20 ASLu, Statuti 3, V, liii: “Item per omnia observetur de casalinis ubi putreda solens deyci, sed quod claudantur de muro vel claudenda. Et quod omnia sedilia que ex domos sunt reducantur et mictantur in eorum domibus et terrenis propriis expensis illorum quorum fuerint et mictantur subitus terram et claudantur et comperiantur, ita quod in classum vel viam publicam derivari non possint” (247).

21 Biow, The Culture of Cleanliness in Renaissance Italy, 1-52.

22 ASLu, CVP 1, fol. 2r: “et solvat pater pro filio, tutor pro pupillo de bonis pupilj, et vir pro uxor et frater pro fratre, dominus seu domina pro famulo et famula, de feudo ipsorum.”

23 Cipolla, Public Health and the Medical Profession in the Renaissance, 11; Cipolla, Miasmi ed umori, 2; Park, Doctors and Medicine in Early Renaissance Florence, 7.

And see the introduction.

24 García-Ballester, McVaugh and Rubio-Vela, Medical Licensing and Learning in Fourteenth-Century Valencia; McVaugh, Medicine before the Plague, 190-240; García-Ballester et al., Practical Medicine from Salerno to the Black Death.

25 ASLu, CG, Rif. 11, 50 (26 February 1389): “Come per litavernari li quali abitano in taverna magiore sono ucisi ne ladicta taverna vitelle, buoi, castroni, agnelli, porci e cavretti e ogni altro bestame ilquale per loro si macella e che tutto
elsangue che esce de dicto bestiami lomencontro in tane lequali anno nele
lorocase facte sotto terra e quive lo lassano stare tutto le piu volte mesi e mesi
per lauale stantia lodicto sangue infracida e forte gitta puza per modo che ogni
vicino che e circunstante ala dicta taverna non puo sostenere a sentire ladicta
puza et nominatamente lastate che e in tempo da doversi ogni persona pigliar
piacere et fresco et etiamdó non obstante che la dicta puza noij adicti
circumstanti dela dicta taverna ancora noia a tutta lacitudinanze di luca impero
che corrompe laire dela cita. Et ancora non obstante che solo pur che si figunti
ladicta puza ancora per d[e]fecto de dicti tavernari no segunta una altra che gitta
grande corrumptione ala dicta nostra cita cioe che ellino di mezo giorno scolano
ilseno per farne candelle ilquale seno gitta sigram puzza che libanchieri e lialtri
artefici che sono presso ala dicta taverna quando sono nel magiore affare
convegnano per ladicta puza abandonare ogni loro facenda et indugiare per fine
che ladicta puza e cessata per laqual cosa sere seguita alacita et acitadini piu cose
come infermita a corpi de citadini che non euile ma danno et vergogna.” The
prevention of disease and its spread is probably implicit here as well, since
stored, stagnant blood was widely perceived as engendering miasmas.

26 ASLu, CG, Rif. 11, 275. The complaint appears as an addition to the statutes
that year. See ASLu, Statuti 6, fols. 172v-173r. The following text is quoted from
the latter source: “Cum multe fornaces non a magnio tempore citra facte et
fabricate sint iuxta et in circuitu civitatis ex quibus propter fettorem et nubes
stagnorum seu paludium que fiunt prope terram que foditur et ex qua lateres
teule et alia artificio terrea conponuntur, aer qui solebat esse subtilis, salubris et
purus factus sit et cotidie efficiatur gravis, grossus et, ut ita dicatur imputus, ex
quo cives et omnes incole civitatis lucane variis morbis et egritudinibus
afficiantur et continuo eciam de novo alie fabricentur ad augmentum infeccionis aeris non sine civium periculo et publico dampno. In ipsisque lateribus teulis et aliis artificiis terrenis ipsi fornacerii non servatis ordinibus et statutis lucani communis, errores committant et delinquant m[u]tipliciter ex quibus cives dampnum recipiant et iacturam.”

27 ASLu, Statuti 6, fols. 172v-173r: “Quia ad evitandum corruptionem et grossiciem aeris que ex stagnis paludium et bosorum que propter evacuationem terre que in fornicibus operatur evenit unde civitas reddetur malesana, auctoritate presentis conscili domini anciani et vexilliferi iusticie populi et communis predicti elegant duos vel tres sapientes et discretos cives per tertium de quibus eis videbitur cum quibus vel maiori parte quorum possint per rectificationem aeris qui propter stagna paludes et bosos ipsisurn fornicium reddetur malesanis et grossus super ipsis fornicibus tam factis quam faciendis ac stagnis paludibus et bosis que proptererea fiunt et ab eis dependentibus et connexis particulariter et generaliter providere, decernede, statuere et ordinare prout eis pro sanitate civitatis et civium videbitur et placebit.”

28 ASLu, Statuti 6, fols. 172v-173r.

29 For instance, ASLu, Anziani, Deliberazioni 5, fol. 133 (30 December 1333) records the payment of a 15-lira monthly salary to the roads official Crescimbene di Verona; 5, fol. 168 (19 January 1334) denotes 5-lira salaries for two notaries of the curia viarum; 24, fol. 235 (6 November 1346) reiterates viarii’s responsibility to repair roads; 28, fols. 10-13 (17 January 1348) relate the announcements (gride) to be made publicly on behalf of the viarii; CG, Rif. 6, fol. 100 (2 December 1376) records the election of ser Andrea Bellomo as roads official; 11, fol. 22 (8 January 1389) contains the election procedure of two roads
officials; Sentenze e bandi 41, fol. 47r (January-December 1369) records taverners fined for selling “carnes fetidas et putridas contra formam statutum.” And see below.

30 The cases appear to be divided more or less equally between accusatorial and inquisitorial procedures, but their precise percentages, as well as the ratio of secret to public allegations remains to be established. On the development of these procedures in the Italian context, see Vallerani, Medieval Public Justice.

31 ASLu, CVP 3, fasc. 3, fol. 6r: “dolose et fraudulenter et contra formam statuti dicte curie posuit et poni fecit in stratam et viam publica[m] certam quantitatem fabarum, occupando dictam stratam et viam contra formam statutorum dicte curie et in grave dapnum Luc. omnis et curie viarum.” See also CVP 5, fasc. 5, fol. 25r-v (1342).

32 ASLu, CVP 3, fasc. 3, fol. 12r: “habet et tenet in quadam sua domo posita in comune sancti Salvatoris in muro in brachio fontane quedam aquarium quod ducit aquam putridam in viam publicam contra formam statutorum.”

33 ASLu, CVP 6, unnumbered fol.: “sciente et malo modo imisit ad mollandum in puteum existentem in via publica...certam maximam quantitatem lupinorum rem.” Florina’s case was later dismissed because the water allegedly contaminated was already putrid, there were no eyewitnesses, and Florina was poor.

34 ASLu Anziani, Deliberazioni 9, fols. 69-70 (20 August 1335).

35 ASLu Anziani, Deliberazioni 18, fol. 42v (17 October 1342).

36 See introduction, and Jørgensen, “‘All Good Rule of the Citee’”; Salminen, “Public Road, Common Duty – Public Road, Private Space?”; Armstrong, “Public Health Spaces and the Fabrication of Identity.”
See also appendix 2 and Bongi, *Bandi Lucchesi del secolo decimoquarto*, 188-90.

ASLu, CVP 3, fasc. 3, fols. 9r-10r. Rural communes are common offenders from the perspective of the extant documents, which contain hundreds of accusations most often regarding neglect of infrastructure and loose animals. On urban-rural relations in this period, see Dean and Wickham, *City and Countryside in Late Medieval and Renaissance Italy*; Waley, *The Italian City-Republics*, 67-84; Wickham, *Community and Clientele in Twelfth-Century Tuscany*.

ASLu, CVP 2, fols. 139-142 (28 July-24 October 1335). See also CVP 4, fasc. 4, fols. 20v-21r (11 February 1340).

ASLu, CVP 10, fasc. 2, unnumbered fol.: “dictus Datuicius...proiecit et decurrere permisit de eius stufa quam detinet...aquam putridam in viam publicam que est ante et circa domum stufe, ex qua aqua putrida fetor exivit et emanavit ad vicinos circumstantes.” And see ibid., fasc. 3, unnumbered fols. (25 August 1354).

Further work is required to trace the particular trajectory of these power dynamics. The point here, in any case, is that the regime considered health a useful term by which to impose or extend its authority.


ASLu, CVP 6, unnumbered fol.: “non destruxit seu coperuit vel actavit dictum necessarium set ipsum retinavit et retinet discopertum, ita et taliter quod euentes...aqua ad quemdam fontem ibi ipse existens videre possunt putrida et fetida lebentia de necessario suprascripto.”

ASLu, CVP 6, unnumbered fol. (31 May-4 June): “transeuntes et euntes per viam publicam et ad ecclesiam supradictam videre possunt putrida et fetida descendentia per necessarium suprascriptum.”
45 ASLu, CVP 9, fasc. 3, unnumbered fol.: “scinderunt et destruxerunt et cavaverunt viam publicam...in pluribus partibus ipse vie per quam ire et redire consuerunt et soliti sunt homines et bestie honerate et dishonerate.” The case continues at some length later in the fascicule.

46 ASLu, CVP 4, fols. 75r-79r (28 April-12 December 1339).

47 Tarr, The Search for the Ultimate Sink, 7-35; Hoffmann, “Footprint Metaphor and Metabolic Realities.”

48 See Trexler, “Measures against Water Pollution in Fifteenth-Century Florence,” implying that that an ecological, as opposed to a purely economic, dimension of Florentine legislation on the maintenance of waterways trailed behind Lucca’s.

49 ASLu, CVP 13 (unnumbered, penultimate fol.). And see CVP 11, fasc. 4. It is yet unclear what this amount meant in relative terms of the city’s budget. But see Haemers and Ryckbosch, “A Targeted Public: Public Services in Fifteenth-Century Ghent and Bruges,” according to whom the single “largest [amount] of spending on public services, 7.7 percent, was taken up by the expenses for public works and infrastructure” (207).

50 ASLu, CVP 7, fol. 11r.

51 ASLu, CVP 10, fasc. 1, fol. 2r (January-June 1354).

52 ASLu, CVP 5, fasc. 1, fols. 2v-3r, 84r-v (1342).

53 ASLu, CVP 8, fasc. 12, fols. 39r-40v. And see CVP 11, fasc. 6, unnumbered fol. (5-6 March 1374) for later communications in the vernacular.

54 Jordanova, “Policing Public Health in France 1780-1815.”

55 ASLu, CVP 9, fasc. 3, unnumbered fol. (20 April-27 June 1352).

Pini, “Problemì di demografia bolognese del Duecento.”


The registers directly concerning the office’s activities until the year 1400 are ASBo, Fango, 1-33, which form the basis of the present chapter. A similar remit pertaining mostly to Bologna’s hinterland (contado) fell under the aegis of the capitano del popolo’s works notary, leaving equally rich archival deposits. See Montorsi and Scaccabarozzi, *La giustizia del capitano del popolo*, 446-510. While the areas covered by latter registers tend to exceed the scope of the present study, their abundance for the parallel period merits a brief spotlight, if only to facilitate future research: ASBo, Giudici 376, 379, 381, 400, 407, 410, 415-16, 423, 441, 446, 451, 487, 489, 491, 507, 511, 516, 532, 535, 538-39, 542, 544, 548-54, 556, 562, 576, 581, 586-87, 595, 599, 608, 612, 620, 626, 628, 631, 636, 639-40, 642, 651-52, 659, 664, 673, 683, 687, 691, 695-96, 705, 710, 720, 726, 806, 809, 813-15, 820, 846, 848, 874-75.
5 Fasoli, “Un fossile nel vocabolario istituzionale bolognese del Duecento”;
Maragi, “La santé publique dans les anciens statuts.”

6 Frati, Statuti di Bologna dall’anno 1245 all’anno 1267, 1250, I, XXIII (1:176-82).

7 ASBo, Statuti, 34, I, 1252, I, 1 (fol. 8v).

8 Frati, Statuti di Bologna dall’anno 1245 all’anno 1267, 1256, XI, XCVIII (3:345).

9 See Geltner, The Medieval Prison, 21-27. Nor was the specific ordinance
superfluous. On 6 October 1332, for instance, the prison custodian Azzo de
Laritei confessed to discarding waste in that very manner on the Piazza
Maggiore. See ASBo, Fango 19, reg. 4, fol. 27r.

10 ASBo, Statuti 41, VIII, 1267, I, 21 (fols. 11r-13v).

11 SBo88, I, III: “Quintus [notarius] supersit stratis et viis civitatis et burgorum
aptandis et faciendis fieri et purgationi civitatis et aliis que in suo officio
continentur. Et sit homo expertus qui questiones ad suum officium pertinentes
noverit terminare” (1:11). And see SBo35, I, III (1:8).

12 SBo88, IX, IIII (2:113-14).

13 SBo88, X, XXVIII (2:149).

14 SBo88, III, LXXI (1:155).

15 SBo88, IV, LXXI (1:231).

16 SBo88, X, V (2:136). Well-fed sows give birth to around ten piglets once or
twice a year. If limited to one farrowing, pigs would be allowed to mate around
February, leading to birth in late May or early June. See Kreiner, “Pigs in the
Flesh and Fisc”; Ervynck et al., “An Investigation into the Transition from Forest
Dwelling Pigs to Farm Animals in Medieval Flanders, Belgium.”

17 SBo88, X, VI, VIII, XV (2:137-38, 139 and 143-44, respectively).

18 SBo88, X, III (2:135).


21 *SBo35*, I, 3 and 17 (8 and 43-45, respectively); VIII, 164 (814-16).

22 *SBo35*, VIII, 184 (832).

23 *SBo35*, VIII, 193 (842).


25 These have been partly published in Braidi, *Gli Statuti del Comune di Bologna negli anni 1352, 1357, 1376, 1389*. For the relevant rubrics in the redactions of 1352 and 1357, see I, 2 and 15 (6 and 43-35, respectively); III, 3 (136-38). For 1376 and 1389, see II, 2 and 16 (546 and 604-7, respectively); III, 9 (897-903). The remainder of these collections also touches directly or tangentially on the *viarius*’ duties. See ASBo, Statuti 44, XI (1352), VI, 159-210; Statuti 45, XII (1357), VI, 114, 116; VIII, 6-7, 21-65); Statuti 46, XIII (1376), VII; Statuti 47, XIV (1389-1453), V, 107, 109; VI-VII.

26 ASBo, Statuti 47, XIV, 1389, VI, 25.

27 ASBo, Giudici 806 (1376), 809 (1376-77), 813-14 (1377), 815-16 (1377-78), 820 (1378-79) and 848 (1400) appear to document temporary additions to the capitano’s remit, including the office of the *fango*.

28 In Pinerolo, in fact, the *campari*’s registers (examined in chapter four) are physically kept with criminal tribunal ledgers. Elsewhere environmental offenses emerge sporadically from court proceedings and lists of fines, occasionally brought up by local *viarii*. See for instance, Archivio di Stato di Perugia, Comune, Podestà 2 (May 1262-February 1363), fols. 3v, 52v, 341r-ν, 388v; 7 (May 1274-
June 1275), fols. 4r, 16v, 20r, 54v-55r, 56r, 64r, 65r, 66v, 67r, 67v, 68r, 69v, 70r, 74r-v, 78r, 78v, 84r-85v, 96v-97r, 97v, 109r-v, 130v (perhaps a concentration suggesting the viarius' and related officers' specific input); Giudiziario Antico 2 (1258-1267), 1, fols. 153v, 155v, 181r, 277r-278v. In Pistoia the viarii compiled their own records but of these only one register survives today. See Archivio di Stato di Pistoia, Comune, Podestà 18 (1335).

29 ASBo, Fango 11, reg. 2a, fols. 3r-5v, 14r, 16r, 18r, 19r, 20r-v, 23v, 25r, 26r, 27r-v, 28v, 31v-33v, 34v, 35v-36r, 38r, 39r-v (3 January-29 March 1309); reg. 2b, fols. 3r-v, 7r, 9r-v, 10v, 11v, 13v, 16r, 19r, 23v, 27r, 29v, 39r, 42v, 44r (2-30 April 1309).

30 ASBo, Fango 18, reg. 4, fols. 16r-21v (December 1329-June 1330). In the next semester the visits' number remained similar at ninety-four. See ibid., reg. 5, fols. 17r-20v and 22r-25r (June-December 1330).

31 ASBo, Fango 19, reg. 10, fols. 17r-20r (June-December 1334): 74 visits; 20, reg. 1, fols. 17v-18v (December 1334-June 1335): 86; reg. 2, fols. 16r-18r (June-December 1335): 70; reg. 3, fols. 21r-23v (December 1335-June 1336): 65; reg. 4, fols. 17r-19v (June-December 1336): 56; reg. 5, fols. 19r-21v (December 1336-June 1337): 60; reg. 6, fols. 25r-27v (June-December 1337): 57.

32 ASBo, Fango 1, reg. 5, fols. 37v (20 August 1287) and 51r (16 September 1287).

33 The fango notary's accompaniers are usually listed for each site visit.

34 “Quibus preceptum fuit...quod ab hodie in antea denuptient et accuse[n]t mihi...putredines et omnes puteos non rimondatos et non habentes catenas et situlas vel si haberent ruptas; et habentes adronas non muratas; et proiecentes finactiam vel letamen in viis publicis; et coquentes grassam vel sepum de die vel
de notte in dicta cappella vel vicinia; et sepelientes vel facientes sepelliri ossa in civitate vel burgis Bononie; et mittentes vel ponentes linum ad macerandum in fossato circle; et proiectentes multictium vel eius aquam in viis publicis; et tenentes calcinariam in civitate vel burgis; et battentes pelles ante stationes eorum...et habentes andronas clausas; et proiectentes latamen vel ruscum in andonis comunibus vel tenentes situlas vel aliud quod habeat in se putritudinem vel quod esset periculosum in aliquo casu.” Transcribed in Breveglieri, “Il notaio del fango,” 110-11.

35 ASBo, Fango 1, reg. 5, fol. 68r (23 July 1287). Such proclamations were directly invoked as a legal basis for prosecuting violators. See ibid., fol. 40v (12 September 1287); 11, reg. 2a, fol. 24r (9 February 1309), 2b, fol. 4r (2 April 1309). On the sites of public announcements in Bologna, whose number grew from 32 in 1250 to 204 in 1288, see Bocchi, Bologna: Il duecento, 91.

36 ASBo, Fango 7, reg. 9, fols. 7v (6 November 1298) and 31r (9 February 1299); 17, reg. 2, fols. 10r-v (5 July 1323), 13r-v (7 July 1323), 14v-15r (10-12 July 1323), 20v (16 July 1323), 22v (18 July 1323), 27v (27 July 1323), 30r (28 July 1323), 49r-v (15 August 1323); 21, reg. 1, fols. 4r-5r (1-2 July 1343).

37 ASBo, Fango 7, reg. 3, fol. 8r: “quelibet persona debeat aspicare de viis et spatis publicis letamen, fangum...et omnem inmoniditam hanc ad tres dies pena viginti soldorum.”

38 ASBo, Fango 1, reg. 3, fol. 65v (10 July 1287); 17, reg. 2, fols. 53r-56r (26 September-29 December 1323); 28, reg. 1, fol. 5r-v (17 May 1379).

39 ASBo, Fango 1, reg. 1, fol. 8r.
communis omnia fettoria...propter periculum quod yminet et yminere potest in

civitate bononie.”

ASBo, Fango 6, reg. 3, fol. 12r: “debeant ea sidilia facere murari vel coperiri
secundum formam statuti comunis bononie, ita quod per transeuntes videri non
possint sub pena in statutum contenuta.”

and the State*, 9-60; Jouanna, “Air, Miasma and Contagion in the Time of
Hippocrates.”

ASBo, Fango 7, reg. 4, fol. 8r: “super quedam androna sunt duo sedilia ita quod
putredo exit et fetor venit hominibus ibi transeuntibus et vicinis prope ibi
habitantibus.”

ASBo, Fango 8, reg. 3, fol. 6v: “unam andronam sive clavigam, domine Felippe
uxoris...domini Federighi di Tedaldis capelle sancti Antolini, apertam ex qua
exiebat in via publica maxima putredo et fetor veniebat vicinis et ex hoc maxima
injuria sequebatur viatoribus et transeuntibus per dictam stratam.”

ASBo, Fango 7, reg. 9, fol. 32r (4 March 1299): “sedile turpem aspectum
pudoremque maximum omnibus de vicinia ex opposite existentibus reddit...Et
hoc accidit nedum ibi continue comorantibus sed etiam per viam transeuntibus
et maxime tempore estivo.” See also ibid., fol. 43r (23 January 1299) and 44v-45r
(13-16 February 1299). For similar neighborly disputes brought before the *fango
official* see ibid. 17, reg. 2, fol. 24r (22 July 1323); 19, reg. 8, fols. 56r-58v (16
July-26 October 1334).

ASBo, Fango 16, reg. 6a, fols. 45r-47v (10-16 July 1320): “quod putredo vel
fetor ex eis non exeat...ac etiam ipsas sediliam et clavichas purgari facere et
disgombrare...ita quod alia putredo non apareat.” See also Fango 1, reg. 5, fol. 16r (28 August 1287) and 17v (26 September 1287); Giudici 806, fol. 11r (8 August 1376).

47 ASBo, Fango 7, reg. 9, fol. 10v. Felt unduly targeted and threatened with a fine of 20 soldi each, the butchers called on their own representative (massarius), who seems to have persuaded the notary to drop the case. Another butcher, Simon Gianismasschi, was prosecuted for skinning an ox under a portico near the piazza sant’Ambroggio, leaving behind “blood and filth” (sanguinem et putretudinem). See ASBo, Fango 29, reg. 1, fol. 5r (11 December 1382).

48 ASBo, Fango 13, reg. 2, fol. 52r: “sic quod putredo potevat cadere...in dicto puteo.”

49 ASBo, Giudici 806, fol. 5v. Guido Giovanni, a smith from San Lorenzo in Porta Stiera, was caught by the fango notary placing (“posuisse seu poni fecisse”) two horses in the cemetery of the Franciscan convent. See ASBo, Fango 28, reg. 2, fol. 15r (19 September 1379).

50 A medical degree did not prevent magister Giovanni Nascebeni of Parma, for instance, from disposing of dung in front of his house in violation of the statute. See ASBo, Fango 19, reg. 4, fol. 24r (5 October 1332). A marginal note does however suggest that his status allowed him to avoid prosecution. Another doctor fisice, master Castellano, was less fortunate. He was fined 100 soldi for letting “aqua immunditia” spill from his home near the Ravenna gate into a public way. See ibid., reg. 5, fol. 22 (25 January 1333). The sibling medici Giovanni and Ugone got away with blocking a road for nearly two years until finally earning the viarius’ wrath. See ASBo, Giudici 441, fol. 16r-v (20 May-4 June 1304).
ASBo, Fango 13, reg. 2, fols. 5v-8v (13-22 August 1314).

ASBo, Fango 14, reg. 2, fol. 38v (27 August 1315): “Pizolus Ghinacci capelle sancte lucie qui moratur ad stacionem cum Guidocto Corbisi in androna tuschorum spiritu diabolic o ductus noctis tempore proiecit et posuit putredinem in magnum quantitatem in quodam puteo ipsius domini Ugolini posito in quodam curia domus dicti domini Ugolini in androna tuscorum posita in capella sancte marie di caranis iuxta heredes quidam domini Tortuzi di Passiponeris et iuxta aposa.” For a hinterland parallel, involving a group of men intentionally destroying a millrun off the Savena river, see Fango 21, reg. 5, fols. 23r-25v (16 January 1357).

See, however, ASBo, Giudici 400, fol. 23r (18 October 1302); 710, fols. 3v-4r (9 April 1323), 720, fols. 3r-4v (31 October-2 November 1324), concerning Bologna’s hinterland.


ASBo, Fango 8, reg. 3 (1300-1301); 15, reg. 2 (1317); 20, reg. 1 (1334-1335); 20, reg. 2 (1335); 22, reg. 4 (1361); 24, reg. 4 (1369); 27, reg. 8 (1378-1379).

For an ongoing analysis, comparative and based on further evidence, see the project portal: https://hcommons.org/groups/premodern-public-health/ (last accessed 20 April 2018).

My impression of the ratio between inquisitorial and accusatorial procedures is that it was heavily skewed towards the former. But that does not necessarily mean the complaint originated with officials.

Private correspondences with Sam Cohn, Trevor Dean and Sarah Blanshei are the basis of the statistics on criminal prosecutions in Bologna. For broader contextualization see Bonfiglio Dosio, “Criminalità ed emarginazione a Brescia
nel primo Quattrocento”; Verga, “Le sentenze criminali dei podestà milanesi, 1385-1429”; Dorini, *Il diritto penale e la delinquenza in Firenze nel secolo XIV*; Cohn, Jr., “Repression of Popular Revolt in Late Medieval and Early Renaissance Italy.” Thorough statistics regarding the Bolognese *Corone ed armi* office are in Roberts, *The Birth of Police in Medieval Italy.*

59 This is a major point in Rawcliffe, *Urban Bodies*; and Henderson, *The Renaissance Hospital.*


61 For a continuist view of Bolognese society see Wray, *Communities and Crisis.*

62 Cohn, Jr. *Women in the Streets*, 16-38; Geltner, “A Cell of their Own.” On the broader topic of female deviancy, see Feeley and Little, “The Vanishing Female: The Decline of Women in the Criminal Process, 1687-1912.”

63 Outside the scope of this sample see also ASBo, Fango 1, reg. 5, fols. 14r (21 July 1287), 24v (18 September), 52r (18 September), 66v (14 July), 71r (31 July), 74r (14 August); 7, reg. 9, fols. 2v (11 February 1298) and 39r-42r (13-27 March 1299).

64 The underlying data’s further analysis is the subject of an ongoing research project: [https://premodernhealthscaping.hcommons.org/](https://premodernhealthscaping.hcommons.org/)

65 Lilley et al., “Mapping and Analysing Medieval Built Form Using GPS and GIS.”

66 Bocchi, *Da una crisi all’altra*, 22.


68 Pastore, *Crimine e giustizia in tempo di peste nell’Europa moderna.*
The main archival series recording these activities are the Assunteria di Sanità (beginning in 1555) and the Commissione provinciale di sanità della legazione di Bologna (beginning in 1674).

1 Hughes, “Ripples in Clio’s Pond: The Pre-Industrial City as Ecosystem.”

2 Pirenne, Medieval Cities, 135-73.

3 Fumagalli, Paesaggi della paura, 207-32.

4 Once again, Bologna offers an exception in having preserved the records of its hinterland policing activities, as undertaken by the capitano del popolo.

5 Hoffmann, “Footprint Metaphor and Metabolic Realities.”

6 Dey, “From ‘Street’ to ‘Piazza’.”

7 At the meso level, this process parallels Venetian governments’ struggles to keep waterways in the terraferma unobstructed, as traced by Appuhn, A Forest on the Sea, 74-80.

8 ASpi, AG 882 (1292), 885 (1329), 886 (1325-26), 887 (1323), 890 (1336) and 908 (1299). The modern enumeration does not follow a strict chronological order.

9 Liber Catena, 103, 137, 293 and 345 (44, 57, 110-11 and 126, respectively).

10 Liber Catena...aggiunte, cassazioni, inserzioni, 999-1000 (134-35).

11 Pene-Vidari, Statuti del Comune di Ivrea, 1329, VIII (1:282-83), 1329, XIII (1:285).
12 *Codice Catenato*, 19 (262-69).

13 *Codice Catenato*, 13.11, 17 and 20 (181, 182 and 183), respectively. And see supplemental document no. 47 (4 July 1449) in ibid., 339-40. The statutes and supplement seem to suggest that *camparii*, if ever instituted permanently, succeeded *viarrii* and not vice versa.


15 See, for instance, Archivio Storico Comunale di Cuneo, Ordinati 1, fols. 2r and 3r (25 November 1362); fol. 66r (10 September 1363); 2, fols. 117r-118r (early fifteenth century). Other than Cuneo, I surveyed the archives of Asti, Ivrea, Nizza Monferrato, Pinerolo and Turin, after combing through numerous inventories of the region’s archives, in hardcopy and online. This of course hardly exhausts the region’s potential from an archival point of view.

16 Unless otherwise noted, the account in this section is based on the following works: Croset-Mouchet, *Pinerolo antico e moderno ed i suoi dintorni*; Carutti, *Storia della città di Pinerolo*; Caffaro, *Pineroliensia*; Visentin, *996 anni di mercato a Pinerolo*; Perrot, *Storia di Pinerolo e del suo territorio*.

17 *SPin*, col. 102 (53-54).


19 Le Goff, “*Apostolat mendiant et fait urbain dans la France medievale*”; Le Goff, “*Ordres mendiants et urbanisation dans la France medievale.*”

20 In 1351 Giacomo of Savoia reinforced the exclusivity of the upper market but allowed artisans and others to sell their wares individually in their shops and porticoes. See Bollea, “*Il mercato di Pinerolo nel sec. XIV.*”
See Gentile, “Tipo antichissimo dimostrativo del torrente Chisone presso Pinerolo e Osasco,” which lists key differences between this image and the city’s medieval layout.

Caffaro, *Pineroliensia*, 125. Oddly, Caffaro then proceeds to list numerous preventative interventions and investments in infrastructure that did just that.

See Perrot, *Storia di Pinerolo*, 1:123, who also underscores the heightened risk of epidemics due to the local habit of depositing refuse of all types along the streets and keeping animals and manure in public. Yet he too goes on to list diverse urban amenities (far predating the fifteenth century), which would contradict this generic image.

*SPin*, cols. 59, 65 and 135 (45, 47 and 58, respectively).

*SPin*, col. 152 (62). A *domus vialium* is referred to in a court case as a location. See ASpi, AG 893, fol. 14r (17 February 1352).

ASPi, Atti del Consiglio 164, fol. 80r (26 August 1328). The names and salaries of *viarii* are mentioned regularly throughout these registers, including Atti del Consiglio 164, fols. 5r (27 January 1326), 18v (6 September), 20v (14 November), 60r (late October early November 1327); 166, fols. 11v (around 3 March 1350), 29r-v (26 September 1350); 170, vol. 1, fol. 9v (3 March 1370), vol. 2, fol. 21v (10? March 1373), vol. 3, fols. 9 (2 March 1376), 46r (1 March 1377), 77r (7 March 1378), 108v (27 February 1379); 171, vol. 1, fols. 28v (3 March 1385), unnumbered fol. (14 November); and 172, vol. 1, fol. 11r (2 July 1398).

*SPin*, col. 183 (69).

*SPin*, col. 588 (201).

*SPin*, col. 589 (201-2).

*SPin*, col. 152 (62).
Discoveries occasionally led to violence. See for instance ASPi, AG 882, fol. 5r (5 November 1292).

ASPi, AG 882, fol. 30v.

ASPi, AG 908, fol. 51r.

ASPi, AG 885, fol. 2v.

ASPi, AG 885, fol. 12r.

ASPi, AG 882, fol. 18r.

ASPi, AG 882, fol. 22v.

ASPi, AG 886, fol. 15v.

ASPi, AG 885, fol. 8v.

ASPi, AG 885, fol. 6v. For further instances on theft see ASPi, AG 886, fols. 15v, 21v, 24r, 36v, 38r, 60r; 890, 6r, 6v, 23v, 30r, 31r.

ASPi, AG 908, fol. 8v.

ASPi, AG 887, fol. 30r-v.

ASPi, AG 886, fol. 7r.

ASPi, AG 885, fol. 31r.
For further instances of breaches in water infrastructure, intended and incidental, see ASPi, AG 882, fols. 2v, 5r, 12v, 15v, 36v, 49v; 885, fol. 31r; 887, fols. 7r, 22v, 46r-v, 47r-v, 48r, 50r, 60v, 69r; 890, fols. 30r, 31r; 908, fols. 9r (four instances), 9v (three instances), 10r (two instances), 18r (two instances), 19r, 19v and 42v.

For an exception, in which the viarius Pietro offers an eyewitness testimony, see ASPi, AG 888, fol. 132r-v (22 July 1336).

ASPi, AG 883, fols. 60r-61r, 61v-63r, 63r-64r, respectively. And see ibid., fol. 4r (March 1294) on the invasion of 20 animals into someone else’s field, alongside other alleged abuses; 889, fols. 15r (14 February 1341) for Mizelino de Gascono’s complaint against Jacherio Batendenti, who “gavavit, fregit seu picavit in magna quantitate apidum in eius vinea,” and 19r (2 March 1341) for Bartolina’s charging of Giovanni de Lamota for trespassing into her garden plot. And see ibid., 893, 5r-6r (11 January 1352).

ASPi, AG 883, fols. 86r (25 October 1292?) and 104r-v (? 1292). For violence ensuing from the use or perceived abuse of such sites, or simply detected near then, see ibid., 888, fol. 214r-v (21 October 1336); 889, fols. 156r (16 May 1341) and 186r-v (9 September 1354).

ASPi, AG 888, fols. 24r-26v and 130r-v, respectively. See also ibid., 883, fols. 102r-104r (27 October 1292?); 888, fols. 135r-v (27 July 1336); 893, fols. 22r-24r (4 February 1352), 45r (17 February 1352), 131r-32r (14 May 1352).

SPin, cols. 173-76 (67-68).

Perrot, “Ordine pubblico, giustizia e forze dell’ordine a Pinerolo prima della rivoluzione francese,” 2.
Field masters are attested for Lodi, for instance, since at least 1211. See Vignati, “Statuta vetera Laude,” VIII (540-41), and ibid., LIX (557-58) for the direct linkage of the local camparius with supervision of roads in the countryside. And see, for the later fourteenth century, Gobbi, “Gli statuti di Lodi del 1390,” cc. 400-16 (336-41). Further and somewhat later examples of camparii in Lombardy are attested for Darfo and Anfo. See Vaglia, Statuti rurali di Anfo, Darfo e Darzo, 51, 54, 60, 67 (Anfo); 99, 101, 133 (Darfo). The camparii of Piacenza developed a reputation for making unjust allegations, leading to the abolition of the office in the early fourteenth century. See Fugazza, Lo statuto di Piacenza del 1323, IV, XXXVI (82).

68 Roberts, The Birth of Police in Medieval Italy.

69 Scaccia Scarafoni, “L’antico statuto dei ‘Magistri stratarum’,“ 1410, I: “magistri habeant plenam potestatem jurisdictionem ac auctoritatem exercendi dictum officium magistratus in urbe et extra urbem, in districtu urbis, pro liberatione, reparatione et gubernatione edificiorum, viarum et stratarum ipsius Urbis”
A later rubric (XXV [280]) specifies that the officials’ coverage is to extend on roads for ten miles beyond the city walls. Consistent scholarly consensus holds that the text reflects policies dating at least to Rome’s 1363 statutes. See also Schiaparelli “Alcuni documenti degli magistri aedificiorum urbis”; and Carbonetti Vendittelli, “La curia dei magistri edificiorum Urbis nei secoli XIII e XIV e la sua documentazione.”

Campopiano, “Rural Communities, Land Clearance and Water Management in the Po Valley.”

Carbonetti Vendittelli, Le più antiche carte del convento di San Sisto in Roma, docs. 142 (25 October 1262), 144 (5 February 1263) (287-89 and 289-92, respectively).

“Capitula et statuta terre Alladij,” 1448, 2 (338). Chapter 3 (340) concerns the damage estimators.

“Statuta comunis et hominum Albiani,” late fourteenth century, 24-37 (150-55); and 1429, 37-49 (208-12).


“Statuta Azelij,” 106-7 (508).

“Statuta Barbanie,” early fifteenth century, 43, 81-87 (778 and 800-4, respectively).

“Pacta et consuetudines comunis et hominum Burgi Franchi,” 1348, 3 (910).

“Pacta et conventiones facte ab hominibus Vallis Brozii,” 1497, 1 (842).

“Ordinamentum comunis et hominum Claverani” (1251) in CSC 2:578-621 at 28, 94, 98, 138-40 (586, 602, 604, 616, respectively).
“Volumen statutorum comunis Clavaxii,” 1306-1419, 135, 162, 515 and 539 (324, 336, 370 and 372, respectively).

“Statuta et capitula loci Lezuli,” 1430, 41 and 152-53 (848 and 916-18, respectively).

“Statuta comunitatis et hominum loci Oglianici,” 1352, 6 (1040).

“Capitula et ordinations loci Ugenie,” 1458, 12 (938).

“Statuti capitula et ordinamenta loci Strambini,” 1438, 100, 140-43, 146 and 148 (820, 836-38 and 840, respectively).

Perrot, “Ordine pubblico, giustizia e forze dell’ordine,” 1-2, also mentions camparii operating in Pragelato (1250) and in Mentoulles (1515). And see note 60 above for further cases from nearby Lombardy.

Naso, Medici e strutture sanitarie.

Comba, La popolazione in Piemonte, 55-66.


2 The exception here is Jørgensen, “Private Need, Public Order.” And see Jørgensen, “Cooperative Sanitation.”

3 Hobbes, Leviathan, ch. 12.

4 While the geographical coverage of the latter section makes no claim to being comprehensive, neither was it selective; it simply reflects the state of public health historiography I was able to access in most modern European languages.

5 Wickham, Framing the Early Middle Ages, 203-19.

6 Jones, The Italian City-State; Napolitano, “The Profile and Code of Conduct of the Professional City Magistrate in Thirteenth-Century Italy.”


9 Here I am deliberately focusing on neighborhood- and city-level planning, as distinct from household-oriented prophylactics, which continued to be informed by medical advice literature throughout this period. See the conclusion to chapter one.


13 Two sound methodological exercises are Israelovich, “Medical Care in the Roman Army during the High Empire”; and Wazer, “Between Public Health and Popular Medicine.”

14 Vitruvius, *De architectura*, I, i, 3 (1:8).

15 Vitruvius, *De architectura*, I, i, 10: “Disciplinam vero medicinae novisse oportet propter inclinationem caeli, quae Graeci *climata* dicunt, et aeris et locorum, qui sunt salubres aut pestilentes, aquarumque usus; sine his enim rationibus nulla salubris habitatio fieri potest” (1:14).

16 Vitruvius, *De architectura*, VI, i, 2: “quod ultra natura laedit, arte erit emendandum” (1:10).
Vitruvius, *De architectura*, I, iv (1:35).

Varro, *De re rustica*, I, xii: “Danda opera ut potissimum sub radicibus montis silvestris villam ponat, ubi pastiones sint laxae, item ut contra ventos, qui saluberrimi in agro flabunt. Quae posita est ad exortos aequinoctiales, aptissima, quod aestate habet umbram, hieme solem. Sin cogare secundum flumen aedificare, curandum ne adversum eam ponas; hieme enim fiet vehementer frigida et aestate non salubris. Advertendum etiam, siquae erunt loca palustria, et propter easdem causas, et quod crescant animalia quaedam minuta, quae non possunt oculi consequi, et per aera intus in corpus per os ac nares perveniunt atque efficiunt difficilis morbos....Vitandum, inquit, ne in eas partes spectet villa, e quibus ventus gravior afflare soleat, neve in convalli cava et ut potius in sublimi loco aedifices, qui quod perfatur, siquid est quod adversarium inferatur, facilius discutitur. Praeterea quod a sole toto die illustratur, salubrior est, quod et bestiolae, siquae prope nascuntur et inferuntur, aut efflantur aut aritudine cito pereunt. Nimbi repentini ac torrentes fluvii periculosi illis, qui in humilibus ac cavis locis aedificia habent, et repentinae praedonum manus quod improvisos facilius opprimere possunt, ab hac utraque re superiora loca tutiora” (208-10).

Vitruvius, *De architectura*, I, iv, 2: “corpora, quae in his locis sunt, vitiantur” (1:36).

Vitruvius, *De architectura*, I, iv, 2 (1:37).

Vitruvius, *De architectura*, I, ic, 5 and 6: “Quare cavendum esse videtur in moenibus conlocandis ab his regionibus quae caloribus flatus ad corpora hominum possunt spargare...Item haec e refrigerationibus umoris ventorum et aurarum infunduntur vitia corporis” (1:38).
On the “green turn” in military historiography see, most recently, Govaerts, “Mosasaurs,” chapter one.

Onasander, Strategikos, 8.2 (405).

Thousands of military personnel during the crusades died from non-combat related afflictions, according to Mitchell, Medicine in the Crusades, 1-3. For comparable figures in Antiquity see Rosenstein, Rome at War, 130–31. For further ramifications see Prinzing, Epidemics Resulting from Wars.


I am leaving aside another relevant form of knowledge, namely military veterinary medicine, which may well have served governments and butchers in establishing whether meat sold on the urban market was spoiled or not.

Vegetius, De re militari, III, ii: “Nunc, quod uel maxime proundendum est, quemadmodum sanitas custodiatur exercitus, admonebo, hoc est locis aquis tempore medicina exercitio. Locis, ne in pestilenti regione iuxta morbosas
paludes, ne aridis et sine opacitate arborum campis aut collibus, ne sine tentoriis
eaestate milites commorentur; ne egressi tardius et calore solis et fatigatone
itineris contrahant morbum, sed potius in aestu, ante lucem coepto itinere, ad
destinata perueniant; ne saeua hieme iter per niues ac pruinias noctibus faciant
aut lignorum patiantur inopiam aut minor illis uestium suppetat copia; nec
sanitati enim nec expeditioni idoneus miles est, qui algere compellitur. Nec
perniciosis uel palustris aquis utatur exercitus; nam malae aquae potus,
ueneno similis, pestilentiam bibentibus generat” (67).

29 McVaugh, “Arnald of Villanova's Regimen Almarie (Regimen Castra
Sequentium) and Medieval Military Medicine,” 207, acknowledges Arnald’s debt
to Vegetius (a copy of whose De re militari furnished his private library), but
likely overstates Arnald’s originality given his omission of other Classical authors
from the discussion. Either way, McVaugh makes the salient point that army
medicine began long before the battlefield and that Arnald, for one, engaged
James II of Aragon (1267-1327) precisely on this matter. For further
contributions on military hygiene in the later Middle Ages see Hönger, Ärztliche
Verhaltungsmaßregeln auf dem Heerzug ins Heilige Land für Kaiser Friedrich II.;
and Bernard de Gordon, Lilium medicine, 1.31 (fol. 21rb). And see the
suggestions by Metzler, Disability in Medieval Europe, 117-19, on the
contribution of army physicians to urban healthcare; and by Pazzi,
“L’organizzazione dei servizi sanitari d’urgenza nel medioevo,” on the impact of
the crusading movmement on urban sanitation. Christine de Pizan, The Book of
Deeds of Arms and of Chivalry, 1.14, ed. Willard, 43, also builds on Vegetius in
drawing an explicit parallel between keeping armies and cities in good health.

31 Schmitz, *Sancti Benedicti regula monachorum*, 66: “Monasterium autem, so possit, fieri, ita debet constitute, ut omnia necessaria, id est, aquae, molendinum, hortus vel artes diversae intra monasterium execeuntur, ut non sit necessitas monachis vagandi foris, quia omnino non expedit animabus eorum” (134-35).

And see Jotischky, *A Hermit’s Cookbook*, 123-86.


33 Schmitz, *Sancti Benedicti regula monachorum*, 35 and 36 (95 and 96-97, respectively).


35 Harvey, *Living and Dying in England, 1100-1540*.


38 Anonymous, “*Descriptio positionis seu situationis monasterii Clarae-Vallensis*”: “Alter fecundus vinearum, alter frugum fertilis, jucundum visui, et usui commodum ministerium praebet” (569).

39 Anonymous, “*Descriptio positionis seu situationis monasterii Clarae-Vallensis*”: “et ad unius morbi remedium, divina pietas multa procurat solatia, dum aer nitida ridet aerenitate, terra fecunditate spirat, et ipse auribus, naribus, colorum, canorum, odorum delicias haurit” (569-70). Reinforcing the argument from another direction are also ironic and critical descriptions of Cistercian lives.
meant to expose the brethren’s hypocrisy through underscoring their comfort and material success. See Sinex, “Echoic Irony in Walter Map’s Satire against the Cistercians.”

40 Anonymous, “Descriptio positionis seu situationis monasterii Clarae-Vallensis”: “asportans immunditias, omnia post se munda relinguit” (571).

41 Translation from Anonymus, “A Description of Clairvaux.”

42 Lugano, “I Cisterciensi e le loro propaggini nell’Alta Italia.”

43 In this sense, too, the Cistercians were no exception. See Lester, Creating Cistercian Nuns; Bouchard, Holy Entrepreneurs.

44 Nicholas, The Growth of the Medieval City, 31-33, 71, 73, 82 and 208-10.

45 Lawrence, The Friars; Andrews, The Early Humiliati; Van Engen, Sisters and Brothers of the Common Life.

46 The Franciscan Master General Bonaventure of Bagnoreggio (1221-1274), for instance, forbade his brethren from keeping the company of any animals, “except for cats and certain kinds of birds for the purpose of removing garbage.” See Bonaventure of Bagnoreggio, “Constitutions of Narbonne,” 23 (87). On friars’ and monks’ development of urban water technologies, see Magnusson, Water Technology in the Middle Ages.

47 Montford, Health, Sickness, Medicine and the Friars in the Thirteenth and Fourteenth Centuries; Andrews, Churchmen and Urban Government in Late Medieval Italy, c.1200-c.1450; Bruzelius, Preaching, Building, and Burying.

48 Vitruvius, De architectura, I, v, 1: “Cum ergo his rationibus erit salubritatis moenium conlocandorum explicatio regionesque electae fuerint fructibus ad alendam civitatem copiosae, et viarum munitiones aut opportunitates fluminum
seu per portus marinae subvectionis habuerit ad moenia conportationes expeditas, tunc turrium murorumque fundamenta sic sunt facienda...” (46).

49 Vitruvius, De architectura, I, vi, 1: “Qui si frigidi sunt, laedunt; si calidi, vitiant; si umidi, nocent” (52).


51 See Pellegrini, Toponomastica italiana.

52 An evocative, if somewhat later example is the small Piedmontese town of Alluvioni Cambiò, so named to capture its repeated harassment by (and by the same token resilience against) the Tanaro’s and Po’s flooding.

53 Lucca’s etimology is however listed as uncertain in Pieri, Toponomastica delle valli del Serchio e della Lima, 209.

54 Borca, “‘Towns and Marshes in the Ancient World”; Borca, “‘Palus Omni Modo Vitanda’.”

55 Medieval medical history in the traditional sense remains a thriving field, encompassing institutional history, specific areas in clinical or theoretical studies, the transmission of scientific texts and other bodies of knowledge such as recipes and health regimens, the careers and intellectual legacies of specific physicians or schools, epidemiological studies, the relations between medical and religious healing, bio- and paleoarchaeology, and much more.

56 A promising start has been Kinzelbach, “Infection, Contagion, and Public Health in Late Medieval German Imperial Towns.” And see Gläser, Lübecker Kolloquium zur Stadtarchäologie in Hanseraum IV: Die Infrastruktur.

57 See, however, the promising research project regarding medieval Trondheim directed by Axel Christopherson: https://www.ntnu.edu/museum/medieval-
urban-health-from-individual-to-public-responsibility-ad-1000-1600-
medheal600- (accessed 14 September 2017).

58 See, for instance, Schager et al., “Waste management in Nya Lödöse.”

59 Chew and Kellaway, London Assize of Nuisance 1301-1431; Winter, “The
Portsoken Presentments.”

60 Rawcliffe, Urban Bodies.

61 Jørgensen, “‘All Good Rule of the Citee,’” 311.

62 Skelton, Sanitation in Urban Britain.

63 Skelton, Sanitation in Urban Britain, 106 (quoting a 1652 ordinance from
York).

64 Skelton, Sanitation in Urban Britain, 81; Munkhoff, “Poor Women and Parish
Public Health in Sixteenth-Century London.”

65 McVaugh, Medicine before the Plague; García Ballester, Practical Medicine from
Salerno to the Black Death.

66 Bernat i Roca, “El mantenzmment de la salubritat pública a Ciutat de Mallorca
(segles XIV-XV); García-Ballester, "Un reto para el galenismo: mejorar la salud.”
And see below.


68 Córdoba de la Llave, “Eliminacion y reciclaje de residuos urbanos en la Castilla
bajomedieval.”

69 Agresta, “Many Waters.”

70 Higounet-Nadal, “Hygiène, salubrité, pollutions au Moyen Age. L'exemple de
Périgueux,” 86.

Touati, “Le peste noire,” 804 and 806, respectively. The prosecution of animal owners, and at times animals themselves, for health and property damage, however, was hardly limited to times of plague. See Girgen, “The Historical and Contemporary Prosecution and Punishment of Animals.”

Litzenburger, “La sécurité alimentaire et sanitaire à Metz à la fin du Moyen Âge.”


Rigaudière, *Penser et construire l’État dans la France du Moyen Âge*, which also briefly discusses medieval French roads offices (*voirie*), on pp. 332-34.


Coomans. “In Pursuit of a Healthy City”; Van Oosten, *De stad, het vuil en de beerput*. 


Crouzet-Pavan, “Recherches sur la nuit vénétienne à la fin du moyen âge.”

Bourbou, *Health and Disease in Byzantine Crete*.

Little, *Plague and the End of Antiquity*, section III. And see Rosen, *Justinian’s Flea*.


*Codex Justinianus* 11.42.10; Crow, Bardill and Bayliss, *The Water Supply of Byzantine Constantinople*, 231.


Attaleiatis, *The History*, 20.29 (303).

89 *The Book of the Eparch* XVII, 2 (187); XVIII, 3 (189-90). Translation from ibid., 261 and 262, respectively.

90 Attaleiatis, *The History*, 4.9, typifies Theodora’s swift restoration of order in the capital after an attempted coup by her appointment of “men to the highest offices and to the supervision of the market” (27).

91 For the military’s relevance to processes of modernization in the region, see Moulin and Isil Ulman, “Introduction: The Particular Place of Medicine in the Debate on Modernity and Modernization in the Middle East in the 19th and 20th Centuries.” On military manuals as sources for premodern public health history see Geltner, “In the Camp and on the March.”

92 Maurice’s Strategikon, 160.

93 Anonymous, *Treatise on Strategy*, 10:6-11, 17-18, in Dennis, *Three Byzantine Military Treatises*, 31. Dennis follows an earlier tendency to date the work to the sixth century, but the more recent consensus has pushed the work two centuries later. See Zuckerman, “The Compendium of Syrianus Magister.”


95 In Dennis, *Three Byzantine Military Treatises*, 159. The anonymous, late tenth-century *Treatise on Campaign Organization*, 1.49-50 (ibid., 249) also instructs watering horses downstream “so the river may be kept clean further up.”

96 Dennis, *The Taktika of Leo VI*, 9.3 (195).

97 Cecaumeno, *Raccomandazioni e consigli di un galantuomo*, c. 29 (71).


100 Anonymous, “Miracles of St. Thekla,” 105.


Miller, *The Birth of the Hospital in the Byzantine Empire*, 118-40.

Varlik, *Plague and Empire in the Early Modern Mediterranean World*.


Dols, *The Black Death in the Middle East*, 292-93.


On the Greco-Roman roots of Islamic medicine, see Koetschet and Pormann, *La construction de la médecine arabe médiévale*; Bürgel, *Ärztliches Leben und Denken im arabischen Mittelalter*; and Millán, “Greco-Roman Case Histories and Their Influence on Medieval Islamic Clinical Accounts.”


public domain was ignored by both government and civil society.” See Ebrahimnejad, *Medicine, Public Health and the Qajar State*, 36.

110 Scanlon, “Housing and Sanitation: Some Aspects of Medieval Islamic Public Service.”

111 Stearns, *Infectious Ideas*.


115 Cook, *Commanding Right and Forbidding Wrong in Islamic Thought*.


Chalmeta Gendrón, “El ‘Kitâb fī Ādâb al-Hisba’,” 63: “Obliguese a los operarios que hacen el pan a lavar todos los días sus artesas para amasar, así como sus paños que guardaran por la noche, ya que se les ha encontrado tendidos [durmiendo] encina. Se les prohibirá ponerse a trabajar antes del amanecer por la posibilidad de que en ese momento no presten mucha atención como consecuencia de que acaban de despertarse. Vigíleseles para que se bañen a menudo, lavándose la cabeza, especialmente durante el verano” (163).

Chalmeta Gendrón, “El ‘Kitâb fī Ādâb al-Hisba’,” 72: “Les obligará a lavar y limpiar las esteras donde colocan la carne, todos los días. Expondrán sus balanzas delante de las tiendas para que el comprador vea perfectamente lo que se le pesa y con qué. El tajo para cortar la carne ha de estar a la izquierda del carnicero, según se coloca de cara al zoco, con el fin de que se vea lo que corta. No estará en el interior de la tienda porque lo taparía con el cuerpo, no a su derecha ya que lo que corta quedaría oculto por su mano izquierda. No se descarne el hueso” (169).

Chalmeta Gendrón, “El ‘Kitâb fī Ādâb al-Hisba’,” 157: “Obligará los alhameles que evacuan el contenido de las letrinas a tapar sus alcubas, que habrán de traer mayores. Cada alcuba será llevada entre dos, cubrándola con sus cuerpos de
modo que no roce ni moleste a nadie; uno traerá una campanilla en la mano para avisar a la gente. Prohibirá que ninguno transporte dos alcubas, llevando una a cada lado, porque así podría dañar a la gente” (410-11). The supervision of these and other amenities, such as public baths (ibid., 158 [411] and graveyards (162 [413]), cannot be limited to maintaining biological health, since they were ritual sites as well for performing religious duties.

122 McVaugh, Medicine before the Plague, 226-27; Ghabin, Hisba, Arts and Craft in Islam, 76.

123 Powell, “Greco-Arabic Influence on the Public Health Legislation in the Constitutions of Melfi.”


125 Spivak, “Can the Sublatern Speak?”

126 See some of the celebratory titles in Lewis and MacPherson, Public Health in Asia and the Pacific.

127 Dorji and Melgarrd, Medical History of Bhutan, xii.

128 Headrick, Tools of Empire; Headrick, The Tentacles of Progress; Swanson, “The Sanitation Syndrome”; MacLeod and Lewis, Disease, Medicine, and Empire; Arnold, Imperial Medicine and Indigenous Societies; Sutphen and Andrews, Medicine and Colonial Identity; Comaroff, “The Diseased Heart of Africa.” For an exception see Silva Gracias, Health and Hygiene in Colonial Goa (1510-1961), 64-85, published in 1994 on the basis of a PhD dissertation, which continues to argue that, despite their manifest concern for personal hygiene and the regime's persistent attempt to improve public health, “[t]he inhabitants of Goa throughout the Portuguese period displayed a remarkable indifference to environmental problems” (72).
Following the abolition of Ayurvedic medical training in Calcutta under the British, Lord Macaulay ordered to celebrate the first dissection of a body performed by a newly trained Indian with a cannon salute of fifty rounds. See Gupta, “Indigenous Medicine in Nineteenth- and Twentieth-Century Bengal,” 370.

An important exception is Harrison, Public Health in British India. Despite his stated focus on public interventions for and by colonists, Harrison does trace Britons’ gradual rejection of (mostly curative) native medicine under changing political and intellectual circumstances, and underscores British soldiers’ vulnerability to diseases and hygienic conditions that natives dealt with far more ably at times. For another rare glimpse of traditional preventative measures see Khalid, “‘Unscientific and Insanitary’: Hereditary Sweepers and Customary Rights in the United Provinces.”


Nightingale, “Observations on the Evidence Contained in Stational Returns, 1863,” 142. See also Arnold, “‘Cholera and Colonialism in British India.”

The Lancet, 22 September 1877, 440. Quoted (approvingly, it seems) by MacPherson, A Wilderness of Marshes, 14. On the medievalization of indigenous cultures by European colonizers and its legacy, see Davis and Altschul, Medievalisms in the Postcolonial World.
Moreover, earlier Mughal perceptions of and interventions in the Subcontinent’s hygienic routines can easily be gleaned from Babur, Hindustan’s Emperor, *The Baburnama*, 334-35, 363-65, 397 and 428, a text whose prophylactic insights are grounded in Galenic medicine (see ibid., 7-8, 25, 56-59). On the deeper roots of these insights, see Shefer-Mossensohn and Abou Hershkovitz, “Early Muslim Medicine and the Indian Context.”


138 Harvey, “Public Health in Aztec Society,” 159.

139 See also Soutelle, *La vida cotidiana de los Aztecas en vísperas de la conquista*, 45-49. On the technological sophistication of one pre columbian municipality, see Mundy, *The Death and Aztec Tenochtitlan, the Life of Mexico City*, 39-42 and 199-205. On zoning, including for artisanal and medical purposes, in Teotihuacan, see Manzanilla, “Teotihuacan Apartment Compounds, Neighborhood Centers, and Palace Structures.” On the overall fruitfulness of reading between the lines (or looking deeper at the images) produced by colonizers to assess the sophistication of indigenes’ environmentalism see most recently, Gammage, *The Biggest Estate on Earth*, concerning Australia.


McClain, “Japan’s Pre-Modern Urbanism,” 331.

Hanley, “Urban Sanitation in Preindustrial Japan.”


Kiikuni, “The Development of Hospitals and Clinics in Japan.”


See Marco Polo’s loving description of several Chinese cities, especially of Xingzai (Hangzhou), in *The Travels*, 196-206.


1 Gall, Lautenschlager and Bagheri, “Quarantine as a Public Health Measure against an Emerging Infectious Disease,” 9.

2 Davis, *Periodization and Sovereignty*.

3 Crook, *Governing Systems*, 12.

4 Crook, *Governing Systems*, 12 and 13, respectively.


7 In the later twelfth century, William FitzStephen's famous elegy of London, for instance, lists the salubriousness of the city's air, a direct nod at medical theory, as the first among its many qualities. See Stow, *A Survey of London*, 22-29.

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1 The fine is doubled if waste is left before someone else’s house.

2 The edifice can be destroyed by the Roads Officials.

3 Animals can be seized or killed by anyone with impunity.

4 The actual fine is determined by type of damage and the offender’s status.

5 Failure to report carries a 40s. fine.

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1 See also Bongi, *Bandi Lucchesi del secolo decimoquarto*, 188-90, which prints three of these four brief texts, albeit without specifying a source. It is likely however that it draws on a consolidated series of communal promulgations rather than the Roads Masters’ registers since the orthography differs from the present one in many places.