CHAPTER 1

In Search of Hygeia

Systems, Modernity, and Public Health

In October 1875, it fell to the physician and sanitary reformer Benjamin Ward Richardson to deliver the presidential address of the health section of the National Association for the Promotion of Social Science (NAPSS). The occasion was the NAPSS's annual congress, which was taking place that year in Brighton, on England's south coast. Since its establishment in 1857, the NAPSS had brought together thousands of ministers, MPs, councillors, local and central officials, professionals, and voluntary activists in order to advance the cause of more rational ways of governing, both at home and in the British Empire. Other sections dealt with education, legal reform, and finance and trade. Richardson later wrote that he had considered giving a lecture entitled "The Statistics of Death Rates." Instead, having been advised that delegates were "worn out with statistics," he decided "to plunge into the imagination" and outline a utopian city of health."[1]

Richardson called this city Hygeia. All houses were furnished with bathrooms and toilets, and were connected to sewerage and water-supply systems. Sewage was channeled to outlying fields, where it was put to use in agriculture. Pedestrians walked tree-lined streets; traffic was directed underground via subways. Sanitary and medical officers worked unhindered. The municipal council was free of political strife. Hospitals were plentiful. All foodstuffs were inspected. And no one smoked or drank alcohol. It was not, he stressed, entirely free of infectious diseases. Scarlet fever, measles, and whooping cough, for instance, would probably persist,

even if smallpox, dysentery, cholera, typhoid, and typhus would likely be banished; otherwise, most would die from diseases that arose from "uncontrollable causes," among them cancer and those of a "strong hereditary character." Nonetheless, Hygeia was within reach: Richardson estimated it was only a generation away. The "details" existed in places—the particular technologies, practices, and forms of expertise—and had been "worked out by those pioneers of sanitary science, so many of whom surround me today."[2] It was a question of pulling these elements together to form a coherent and seamless urban system. Like all earthly utopias, it is a vision of wholeness and goodness, and of people and things at their most exemplary, somehow emerging from history at the hands of humans. "Utopia itself is but another word for time," Richardson concluded, having noted that Hygeia contained "nothing whatever but what is at this present moment easily possible."[3]

Richardson's presentation of Hygeia is but a scene within the bigger story that this book seeks to retell: the making of a modern public health system in England, roughly 1830 to 1910. The aim is to rethink the modernity of this system by looking at how it was assembled, reformed and, above all, practiced. We begin with Hygeia because it captures something of the epidemiological priorities of public health in this particular pocket of space and time. In Victorian and Edwardian England, the principal focus of public health efforts was the eradication of infectious diseases of a bacterial and viral sort—diseases that would, mercifully, as part of what demographic historians call an "epidemiological transition," lose their deadly salience in the twentieth century, when more chronic and degenerative conditions became the principal causes of death.[4] It captures, too, the growing administrative capacities of public health. Already more than twenty-five years had passed since the establishment (in 1848) of the General Board of Health (GBH), England's first centralized, specialized public health office. By 1875, it was a bureaucratic function that had passed to the Local Government Board (LGB). Since 1872, local authorities had been obliged to appoint medical officers of health (MOsH) and sanitary inspectors. Large-scale sewerage systems were in the process of being constructed. In fact, the largest of these had been completed just that year: London's Main Drainage Scheme, which carried away the waste of more than three million people. Only months before Richardson spoke, parliament had passed the 1875 Public Health Act, a mammoth piece of legislation that consolidated existing statutes passed during the preceding three decades. Its sprawling scope included regulations relating to the supply of water and the disposal of

sewage; the sale of food and the slaughter of animals; the disinfection of insanitary homes and business premises; and the provision of hospitals for those suffering from infectious diseases.

It is easy, then, to understand Richardson's confidence: progress was being made, and might not more be had—significantly more? And yet, quite simply, Hygeia was never realized. In some respects, Richardson's imaginary city is the last place we should begin if we wish to understand, as this book does, the practices and practicalities of governing public health in Victorian and Edwardian England. For a real flavor of what happened we might turn to the papers that followed Richardson's address as part of the deliberations of the health section. For sure, there was no sense of fatalism or powerlessness, but there was frustration and dispute in abundance. Acts had been passed, yet some local authorities, whether out of lethargy or active opposition, had still to implement them; and where they had, the results were disappointing. Any kind of uniformity of practice was wholly absent. At the same time, there was no consensus regarding some basic questions of administration: should water-supply systems, for instance, be publicly or privately owned? Some thought the former, others the latter, invoking as they did so conflicting examples of good practice. Meanwhile, delegates delved into a maddening world of technical intricacies, from those that featured as part of the reform of England's portside quarantine system—an urgent matter, given Britain's global-economic dominance at this point—to those that might strike us as somewhat inconsequential. One paper, for instance, was entitled "Roof Pipes for Ventilating Sewers."

Where, we might ask, is Hygeia in all of this? An editorial in the *Times* was suitably skeptical. It welcomed the ambitions and ideals that informed what it called "Hygeiopolis"; but it was quick to point out that the people of England were just not ready for such a city, given its costs and regulatory burdens. A "model city can never exist," it declared, "until the community intended to inhabit it is educated to render individual freedom subordinate to the public good in a far greater degree than is at present seen to be either useful or necessary by the majority of the people of this country." It went on: "If Hygeiopolis were established tomorrow, before six weeks had passed the Municipal Council would witness a powerful opposition in favour of dirt, freedom and disease."[5] The *Times* was right: governing public health was—and would remain—enmeshed in political struggles and the variable willingness of the public to accept measures designed to improve its health and longevity. To this we might add that reforms were mooted and by turns rejected, adopted,

and reworked; that solutions generated new problems; and that administrative anomalies and shortcomings were routinely acknowledged and debated (as in the deliberations of the NAPSS's health section in 1875). So much for Hygeia: not only was England's public health system a work in progress, always in need of reform; its development was unpredictable, confused, and contested.

Yet, as this book argues, this gap between (high, lofty) ideals and (low, practical) realities goes to the heart of the modernity of the public health system that was assembled in England during the period 1830 to 1910. The book develops this argument by exploiting the word *system*. Curiously, given its ubiquity, both past and present, the word has yet to take center stage within histories of public health—or indeed histories of other areas of administration that were (and remain) just as systemic, be they educational, economic, legal, or penal, to name but a few.

Today, as in the past, the term carries two principal meanings.[6] One of these, to quote Johnson's *Dictionary of the English Language* (1755), is "any complexure or combination of many things acting together"; or in the words of a later dictionary, system as an "assemblage of parts adjusted into and working as a whole, being mutually dependent."[7] This, it is argued here, is precisely what the public health system was, *in actu:* a shifting assemblage of interacting parts and practices, people and things, which, crucially, included more specialized systems—or subsystems, as they might be styled—of sanitary inspection, waste disposal, and statistical classification, among many others. The modernity of the system partly resides in its complexity, and in the way it was reflected upon and realized as a series of systems, from the system as a national whole to multiple systems within.

The other meaning is system as method, as a set of practices that are ordered, regular, and uniform; or, as Johnson's *Dictionary* had it, "a scheme which unites many things in order."[8] It is from this meaning that the term *systematic* derives, understood as "methodical, regular," to quote one dictionary published in 1874; or as "methodical, according to a plan, not casual, sporadic, or unintentional," as another later put it in 1914.[9] Let us be clear: England's public health system during the Victorian and Edwardian periods was never systematic—far from it, at all levels, and at each step of the way. And yet, so this book contends, no system, small or large, could have arisen, functioned, or been critiqued without a modicum of desire for, or conception of, systematic systems. To be sure, these conceptions were hugely varied, and at their most extreme they offered visions of total system and administrative perfection; or at

least something approaching perfection, as the possibilities were then understood, as in Richardson's Hygeia. Nonetheless, in order to understand what happened and how, the slippage between these two meanings of system should be embraced. It is only by doing so that we can grasp the modern dynamism—the spirit of restless critique and permanent innovation—in which a public health system was put together and practiced in Victorian and Edwardian England. No one was antisystem, even if some were more pragmatic than others. And if there was frustration, then it was frustration born of the assumption of historical progress, and that things might be administered in a more systematic, efficient, and uniform fashion. Modernity is nothing if not a confused, Sisyphean search for cities like Hygeia.

In sum, this is a book about why Hygeia was never built. But it is also a book about modernity, and a culture of governing in which a city such as Hygeia was taken seriously and deemed possible.

FROM THE "HEROIC" TO THE "ANTIHEROIC"

To focus on systems is not the usual way to write the history of modern public health in England. Equally, to seek to refresh and reinvigorate a sense of the modernity of public health in Victorian and Edwardian England is to swim against the tide of the revisionist scholarship that has developed since the 1970s. This is not the place to offer a detailed review of what is now a voluminous literature, characterized by multiple concerns, geographies, arguments, and methodologies; and excellent reviews exist already.[10] Even so, when it comes to thinking about the modernity of Victorian public health—and it is here where the rub lies, in the Victorian period—we might speak of the dissolution of some crucial analytical coordinates; or, to borrow from Dorothy Porter, introducing her comparative collection, *The History of Public Health and the Modern State,* a broad shift from a "heroic" to an "antiheroic" historiography.[11]

The former took shape in the 1950s and 1960s. Whether in a biographical vein or not, accounts of this sort stressed the industry of leading reformers—notably Edwin Chadwick, William Farr, and John Simon—and their allies as they struggled to impose an enlightened, centralized, and science-based program of public administration. Apathetic ministers and parsimonious ratepayers were among the villains, attached as they were to non-interventionism and outmoded traditions of local self-government.[12] Meanwhile, comparative accounts, notably George Rosen's classic study, *A History of Public Health,* situated England

firmly in the European van of nations that pioneered modern public health. The "seed-beds" of the "revolution" to come were many, Rosen suggested, not least German conceptions of an all-encompassing "medical police," which emerged in the second half of the eighteenth century. Revolutionary France and industrial England, however, were home to the first public health "movements," he argued, even if the lead quickly passed to the latter during the mid-nineteenth century.[13] It was at this point when towns and cities began building what would become England's most celebrated contribution to the cause of public health: waterborne sewerage systems.

Invariably, this scholarship was of its time. As Richard Price has argued, the 1950s to 1970s were decades when historians took as their starting point the Victorians' own sense of epochal change, while looking backward through the modernizing "lens of the twentieth century."[14] In this case the "lens" offered a vision of a collectivist, social-democratic modernity; or in the case of public health, a future of socialized medicine. In Britain at least, books on public health were thus part of a broader seam of works written on the "origins" of the welfare state, the NHS, and council housing amid the more liberal, laissez-faire modernity of the nineteenth century.[15] It was at this point, in the throes of a society enduring the twin traumas of urbanization and industrialization, when a modern state began to cohere. There was even talk of a Victorian "revolution in government," presaging the more obvious milestones reached by the New Liberalism of the Edwardian period, chief among them the National Insurance Act of 1911.[16]

It would be wrong to caricature this literature. No consensus emerged from these accounts. There was intense debate, for instance, regarding the precise admixture of governing philosophies that presided over the "growth of the state," if indeed they played any role at all. Even so, the welfare state of postwar Britain served as a crucial means of narrative orientation. At the very least it lent the story of Victorian and Edwardian public health a progressive quality, rooted in science and humanitarian sentiments, while amplifying a sense of the modernity and novelty of what happened.

The antiheroic scholarship that began to develop in the 1980s has not dispatched entirely with the conceptual apparatus and terminology of the more heroic historiography, or with some of its claims. "Modern society" and "modern public health" are still invoked. So too is a "modern state" that was at once more centralized, bureaucratic, and information-rich compared to its medieval, early modern, and eighteenth-century prede-

cessors. Comparative accounts still rank England among the homes of modern public health, and still largely for its development of more environmental and sanitary approaches. Every other facet of the scholarship, however, has been significantly modified, even overturned, dissolving any sense of progressive or necessary problem solving, while encouraging a more diminished sense of novelty and change. Crudely, we might distinguish between four lines of revisionist reappraisal.

The first is the most diffuse: the absence of any overarching modernizing trajectory and, accordingly, the constitutive importance of national and local peculiarities. Peter Baldwin's *Contagion and the State in Europe, 1830–1930* is the most striking account in this respect.[17] Baldwin's aim is to contest the correlation, first mooted by Erwin Ackerknecht in 1948, between "politics and prevention," and especially between the styles of regulation pursued in more liberal regimes, such as Britain and France, and those of a more conservative and authoritarian sort, such as Prussia, Austria, and Russia.[18] Instead, examining Britain, France, Germany, and Sweden, Baldwin points to the following in each national case: (a) peculiar and "polymorphous" combinations of prophylactic responses to common pathogenic enemies—in particular cholera, smallpox, and syphilis—ranging from environmental interventions to more person-centered techniques of quarantine, vaccination, and isolation; and (b) a "multiplicity" of explanatory factors, among them political traditions; moral scruples and religious sensibilities; geopolitical interests; and considerations of administrative geography and capability.

The same interpretive attention to detail, however, can now be found in great swaths of scholarship. From within England, at the local level; to Scotland, Wales, and Ireland; to European nations and the United States; and finally, to Britain's empire: in all of these arenas, historians have piled variation upon variation, complexity upon complexity, at all levels, at all moments, and in relation to all manner of diseases and climatic conditions.[19] We would expect as much, perhaps, in accounts of public health in British India, where English innovations were self-consciously "adapted" in the face of "backward" traditions and populations; but it applies just as intensely to accounts of places with a fully developed sense of civilizational kinship, and where English models of innovation were directly emulated, such as the United States and Australia.[20] Ironically, the one quality these multiple sites now have in common is that they were all very different.

The remaining three facets are more or less pronounced in particular works, but all have similarly sapped a sense of linear, modernizing, and

even benign state building. One of these is a reappraisal of the role of science, or rather a plurality of sciences, and how each developed in a contested, stumbling fashion. Notably, given the causal role it was once thought to have played, historians point, not to a "bacteriological revolution" in the 1880s and 1890s, but to a series of slowly maturing, disease-specific breakthroughs alongside a methodological eclecticism among professionals.[21] A third aspect is the way historians have recovered the disciplinary and civilizing dimensions of public health reform in England, which were by no means the preserve of imperial endeavors, whether in India or Egypt, Hong Kong or Singapore.[22] Quite the contrary, they were just as pronounced at home, in the "metropole," where they played a role in the realization of a broadly liberal society. In brief, no longer a neutral enterprise driven by science and humanitarian sentiments, public health is now considered part of a wide-ranging attempt to order society according to various norms regarding race, gender, and class, and the moral requirements of respectable citizenship.[23] This is partly based on the work of Michel Foucault, but also on recovering the ways public health was enmeshed in a patriarchal, stratified, and still largely Christian society.

Finally, the causal role once played by the epidemiological pressures created by urbanization and pronounced demographic growth has faded, amid a recovery of the plurality of options that might have been pursued, and the contingency of those that were. No one disputes the enormity of the demographic transformation that took place. The figures speak for themselves. The population of England and Wales rose from roughly 6.5 million in the mid-1750s to roughly 9 million in 1801, before beginning a remarkable course of expansion: by 1851, it had doubled to 18 million, about half of which lived in urban areas; by 1901 it stood at 32.5 million, at which point more than 80 percent lived in towns and cities.[24] The argument is that no necessary solutions followed, even if it was clear to most that something had to be done. Strikingly, the Chadwickian battle against dirt is now viewed as a strategic choice that turned upon a narrow and selective vision of what constituted public health: a vision, that is, that privileged the provision of sewerage systems and water closets over the reform of medical relief, and more holistic conceptions of what caused death and disease.[25] As Christopher Hamlin has emphasized, *public health* was—and remains—a mutable and contested term. Certainly public health understood as an administrative enterprise with particular priorities, forms of expertise, and personnel is a very different thing to the health of the public.[26]

The above is only a sketch. But it will be evident how much the antiheroic readings have done to undermine any clear sense of the modernity of public health in Victorian England, even if the term *modern* continues to be used (much as it does elsewhere, in relation to various genres of historiography). All that once seemed solidly modern—progress and developmental direction; science and humanitarian endeavor; revolutions and rapid change and innovation—has melted away, amid a suitably skeptical and empirically driven insistence on multifactorial causation and contingent choices; variation at all levels and in all places; and invariably complex mixtures of science and politics, continuity and change, and theories and practices. And this too was, and still is, of its time. At the very least, as Porter has noted, it reflects the broader (even, in her terms, "postmodern," "relativist") skepticism toward grand narratives of historical development that emerged during the 1980s, and a more critical disposition toward science and the modern state as sources of emancipation and betterment.[27]

This book endorses this revisionism. There should be no turning back: no repression of contingencies or variations; no resort to monocausal explanations or sources of change; no reassertions of the origins of a state to come. Yet, the argument of this book is that we can affirm just this—contingency and choice, contestation and variation—while also insisting on the modernity of public health in Victorian and Edwardian England. To do so is to argue that we might find a modern *form* or *structure* in the formation and performance of that which now appears to be without form or structure. Ultimately, to do so is to argue that modernity inheres not in a particular outcome or solution, but in the way in which an administrative problem—in our case, public health—is posed, practiced, and reformed: or, to put it another way, in open-ended processes of modern order*ing,* rather than the attainment of order as such, or movement toward a particular endpoint or telos. The chapter now sets out the key elements of this argument and the understanding of modernity that informs the chapters that follow.

DISPLACING THE STATE

The crucial assumption this book makes is that governing is a matter of discourse and practice: a combination of cultural-intellectual *and* material-logistical forces. In this way, the book works with both the "cultural" and the "material turns," and locates agency and change in shifting amalgams of words and things, meanings and practices, people and

technologies.[28] One such historical site is the state. It seems that around 1780, the term *state*—though it was normally capitalized—began to be used in a modern sense to refer to an abstract, singular agent that might act and do things, and so "interfere" and "intervene" in society.[29] This was in contrast to earlier uses, when it referred to social-institutional rituals and exchanges embedded in people's lives, and time-honored hierarchies, as in the "states" or "estates" of society.[30] The Victorians spoke about the state in this functional and impersonal fashion, even if by the end of the century a "skein of states" had emerged, as James Meadowcroft has put it, ranging from the state understood as a legal and political power distinct from society to the state understood as the collective incarnation of the nation's capacity to govern itself.[31] Advocates of public health reform certainly invoked the state, most notably, perhaps, when speaking of "state medicine," a term popularized from the 1850s onwards. Likewise, opponents of reform invoked the state, where it normally meant something quite restricted: legal compulsion of national scope and active central regulation, as distinct from the voluntary efforts of individuals, families, and localities.

But whereas some scholars have argued for "bringing the state back in," this book seeks to displace the state in favor of a focus on systems and governance, and a more diffuse understanding of power and agency.[32] The term *system* captures this (see above), and the term *governance* does much the same. To speak of governance is to focus "less on the state and its institutions and more on social practices and activities," as one introductory has text put it.[33] Historians have used it in just this fashion to describe those practices and processes that organize and enable collective order—or "the ordering of order," as one account has it—but which extend much beyond the state and into civil society, economic markets and commercial agents, local authorities, and even as far as the self.[34] It is not a question of abandoning the state, for it was and remains an important referent and actor. To adopt the minimal definition, laws of national scope were forthcoming on a regular basis, and some of these were of a compulsory sort. And just as crucial were various other practices associated with the modern state that were conceptualized and contested around the early nineteenth century, including center-local relations, statistics, and bureaucracy. All were part of what made governing public health modern in Victorian and Edwardian England.

Why, then, focus on systems, and multiple agents of governance? One reason is that the state itself can be grasped quite empirically in this fashion. As Patrick Joyce and Timothy Mitchell have argued, for all its

abstract impersonality, the modern state was, and remains, rooted in intricate systems and the work of the myriad agents that operate and maintain them. Among many other examples, we might note taxation systems (e.g. national income tax), state-owned communication systems (e.g., postal and telegraphic services), and standardized systems of weights and measures.[35] One might even regard the modern state as the *effect,* rather than the cause, of these many systems; but certainly, as we shall see in this book, practices understood in terms of the state, such as the generation of official statistics and the performance of official forms of inspection, were all systemic in that they turned upon the coordination of multiple agents and a medley of technologies and practices. Seemingly innocuous technical details and humble administrative acts were the very stuff of governing, if also of conflict and frustration.

The second key reason is that making decisions about what to do was less a matter of opting for a bigger or a smaller state than it was of adopting, reworking, or choosing between particular systems. Indeed, if there was reference to the state, then reference to systems, of one sort or another, was decidedly more frequent. These included the system as a whole, grasped as a national enterprise, as well as multiple subsystems, from systems of inspection and statistical publicity to domestic toiletry and plumbing systems. Public health was by no means exceptional in this respect. During the early and mid-Victorian period, for instance, the "new poor law system" was contrasted with the "old system"; prison reformers spoke of the "prison system," and discussed the relative merits of "silent" and "separate systems" of incarceration pioneered in the United States; education reformers compared the "monitorial system" of school instruction to the "Glasgow system"; civil engineers building a national "railway system" fought over the practicality of "broad" versus "narrow gauge systems"; and these examples might be multiplied. Put another way, displacing the state in favor of systems and governance enables the historian to grasp contingency not just on various levels and scales—from the system as a whole to systems within—but also in terms of how it was practiced and conceived at the time.

MODERN PROCESSES AND SYSTEMIC DYNAMICS

This is where the book locates the quality of being modern—in the formation and functioning of governing systems—a quality that first became evident, so it is argued here, during the early to mid-Victorian period. This is not to suggest, it should be emphasized, that modernity

equates with the existence of systems per se. In fact, another strand of revisionist historiography concerns the recovery of the vibrancy and cogency of public health efforts that predated the nineteenth century, extending as far back as the medieval period.[36] A key feature of this literature has been the desire to avoid the kind of anachronistic readings of a premodern past that began with the Victorians themselves, as Carol Rawcliffe has recently argued, where it is the absence or ill-formed origins of those modern features that were to follow that form the analytical point of departure (e.g., a centralized state or professionalized expertise).[37] Instead, the broad aim has been to understand the past in terms of its own distinctive idioms, administrative customs, and prophylactic rationales. And once we do so, we find not only active assemblages of governance but also a recognized way of doing things.

So what, briefly, of the functioning of the premodern public health systems that preceded the modern systems of this book? Certainly, in some respects, public health was already being posed and practiced as a matter of national governance. Health might be conceived in collective terms via the aggregate notion of "population," a product of the late seventeenth century, and there was occasional reference to the "public health of the nation," as in William Blackstone's *Commentaries on the Laws of England* (1765–69).[38] During the sixteenth century, the Privy Council began issuing national books of orders in times of epidemic emergency, in particular during visitations of bubonic plague, the last of which occurred in 1665–66.[39] From roughly 1700 onward, parliament provided a degree of national mediation, to the extent that it sanctioned acts that applied to specific localities.[40] In 1808, a National Vaccine Establishment was founded to promote smallpox vaccination.

Yet, as the revisionist historiography suggests, this was essentially a localized and hierarchical culture of governance, one where public health measures were embedded in a seam of administrative units designed to secure the "common weal" and the "publick good."[41] Among these units were counties, boroughs, and parishes, whose origins and responsibilities derived from a jumble of ecclesiastical customs, royal charters, Saxon practices, and acts of parliament. There were, however, at least two sources of coherence and system. One was the authority of property and the distribution of offices according to social status. The second was resort to court-based proceedings. In counties, for instance, monthly petty sessions presided over by a duo of gentlemanly magistrates provided the principal means of dealing with a medley of offenses collected under the expansive common law rubric of nuisances.[42] At once judicial

and administrative agents, magistrates generally ruled on individual cases "presented" by inhabitants, which might include complaints relating to leaking cesspits and negligent pig keeping.[43] A similar culture of administration prevailed in towns and cities, where corporate mayors and aldermen might act as ex-officio magistrates, or where manorial courts were in place, as in Manchester (up to 1846) and Birmingham (up to 1854).

At the same time, court-based processes were supplemented by the actions of various agents, either paid for or called upon to act in a voluntary capacity. Physicians, apothecaries, and lay healers, for instance, attended to the sick. The neediest might avail themselves of the medicines and food distributed by local overseers, as part of the welfare provisions afforded by a parish-based poor law system. Beyond times of emergency, when tactics of isolation and quarantine were deployed, environmental measures were also implemented, amid an already eclectic sense of the causes and vectors of disease, which ranged from corrupt atmospheres and "fomes" (tiny particles) to rotting flesh and human contact.[44] As early as 1552, the corporation of Norwich established a body of two aldermen and ten freemen, called the Surveyours of the Ryver and Streates, to enforce bylaws relating to the repair and cleanliness of waterways, pavements, and roads.[45] Markets were another site of regulation. During the eighteenth century, Manchester's Court Leet annually appointed a handful of propertied inhabitants to act as Market-Lookers for Fish and Flesh, and Officers for Wholesome Ale and Beer.[46] We can even point to engineering projects, such as the building of artificial "conduits" to channel drinking water to homes, as well as ditches to manage rain and surface water.

Finally, there were significant innovations, even if all served to refine, rather than challenge, established practices and forms of authority. Besides the growing formalization of magisterial powers, the poor laws, as well as common law (as in Blackstone's *Commentaries*), new units of administration developed. Most notably, during the second half of the eighteenth century so-called improvement and police commissions were created in towns to further the work of creating a nuisance-free environment. Empowered by local acts of parliament, and composed of local elites and property owners, these bodies were charged with enhancing the lighting, paving, and sweeping of civic spaces and thoroughfares. Between 1760 and 1799, no fewer than four hundred commissions were established.[47]

More might be said on this front. The point is that the transition to a modern culture of governance does not reside in the existence or

invention of 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. The differences lie elsewhere. The most obvious of these has been introduced already: the sheer scale and ambition of public health in Victorian and Edwardian England, and its emergence as a differentiated domain of governance. It is not just the functioning and multiplication of bigger, more specialized administrative and technological systems that is distinctively modern; so too is the sense of human possibility that attended their conception and their recurrent critique and refinement. On the one hand, a new order of logistical magnitude and organizational complexity; on the other, a new order of reforming ambition, which extended to totalizing visions of system. We began with Richardson's Hygeia, which might be dismissed as an isolated flourish of enthusiasm. And yet, as we shall see, similarly grandiose schemes of reform were in the mix, competing for attention, setting agendas, and prompting discussion and dissension. Chadwick's sanitary agenda of the 1840s and 1850s is one instance; another, the alternate visions of state medicine that also emerged midcentury. Neither was implemented as initially (and ambitiously) conceived, and for different reasons; but they were not without considerable consequence.

This only partly explains, however, the pervasive struggle to make systems systematic. Certainly another logistical factor was the demographic expansion noted above and the brute fact of more and more human bodies. This made for urgency and impetus, and it clearly shaped a sense of the scale of what needed to be done and how this was articulated; but equally, as the revisionist scholarship suggests, it caused nothing in particular from an administrative point of view (including systems for counting and classifying this very same demographic growth: see chapter 3). To be clear, the account of modernity presented here offers no single sufficient cause. Instead, the book assumes a multiplicity of causes, as inscribed in the development and work of a series of modern dynamics and accompanying dialectical processes. It argues for three of these. None concern particular (contingent) outcomes; rather, the argument is that between them these dynamics lent a modern form or structure to the way "public health" was posed and practiced, contested and frustrated as an ongoing and open administrative problem. Crucially, it is not one or the other that matters most, but their combination and intersection, something which began in the decades after 1830. We begin with levels of governance.

Levels of Governance

Modern public health is routinely associated with the eclipse of localized, personalized means of governing—such as the figure of the magistrate—by the advent of more centralized and distant forms of authority; or, more simply, with the rise of the modern state. This was indeed a defining aspect of the modernity of Victorian and Edwardian public health. The institutional milestones are well known, in particular, as noted above, the establishment of GBH and LGB. Equally, in terms of eclipsing the local and the personal, we might add an international level of governance, given the profusion of conferences that took place during the second half of the century. One list of international meetings contrasts twenty-four entries up to 1851, and only one before 1815, against 1,390 between 1851 and 1899; and some of these concerned sanitary matters.[48]

The emergence of central and international levels of governance was part of what might be termed, after Anthony Giddens, a "disembedding" of public health, and the assumption of a national and global field of reference; or again, a "lifting out" of public health from "local contexts of action," so that innovations and norms of good practice could be discussed and encouraged on a *trans*local basis.[49] As we shall see, the principal frame of reference was the national one, and developments within this frame at the local level, which were subject to increasingly intense and regular forms of scrutiny. But this did not preclude looking beyond England. The assumption, certainly, was that lessons might be learned from abroad, and, conversely, exported there. From the vantage point of the national and the central, governmental gazes were cast both inward and outward.

Yet, the argument here is that this is only half of what happened. For if centralization and internationalization entailed a "lifting out" or "abstraction" of systems of governance, and the promotion of general standards and models of practice, the flipside of this was a *reinvigoration of the local and the personal.* This is not to invert the familiar association of modernity with central, or indeed international, levels of governance, so that the local and the personal are transformed into the crucibles of modern power. Rather, it is to suggest that we need to grasp these levels together, as part of a modern, "multi-scalar" process of mutual elaboration and transformation.[50] Significantly, this is how governing became conceived at the time. It was during the early Victorian period, for instance, when "local self-government" was first opposed to "centralization." Likewise, the Victorians began insisting on a distinction between

"public" and "private" realms of hygiene, where the latter referred to the self-governing powers of individuals. And it was also a matter of practice. Public health simply could not have happened without the multiple relations that emerged both between central and local agencies, and *within* the local itself, between officials, councillors, and members of the public. This was partly about meeting a logistical challenge, of course. Ultimately, it was at the local level—in towns, streets, and homes, and in and around human bodies—where policies had to work. But governing on multiple levels was also about wrestling with another modern dynamic: the public of "public health" as both an object and a subject of governance.

Agents of Governance

One development commonly associated with the rise of the modern state in England (and elsewhere) is the increasing power of experts and officials. This too is a key feature of modernity. Bureaucratization and professionalization were hugely complicated processes, of course, not least given the persistence of gentlemanly ideals, especially within the central "civil service" (another novel term, along with *bureaucrat* and *expert*).[51] But both processes were pronounced. What became known as "sanitary science," for instance, found a promotional home in various national and professional bodies, among others the Metropolitan Association of Medical Officers of Health (1856; later, in 1873, the Society of MOsH); the NAPSS; the Sanitary Institute of Great Britain (SIGB, 1876; later, in 1904, the Royal Sanitary Institute); and the British Institute of Public Health (1892; later, in 1897, the Royal Institute of Public Health). To put this into a Foucauldian idiom, bureaucratization and professionalization were means by which the English public was objectified, normalized, and disciplined: which is to say, exposed to inspection and compelled to act in accordance with regulations; counted and classified according to norms of good health; and, ultimately, posited like an *object* governed by scientific laws of health.

Yet, once again, this kind of analysis captures only half of a dynamic and dialectical process. For at the same time, and in multiple ways, this public also featured as a *subject* of governance. As Anne Hardy has suggested, there were a variety of "publics" that made up the public of public health, including those of a more civic and voluntary sort, all part of a flourishing civil society.[52] Equally, there was an active process of public empowerment at work that was just as modern as the rise of

expertise and bureaucracy: namely, democratization, and the formation of a parliamentary-political sphere and an extraparliamentary public sphere. The complexities are immense in each case, and not least because of crucial considerations of class and gender. Nonetheless, these developments proceeded more or less in tandem with the rise of professionals and officials. The 1832 Reform Act and the 1835 Municipal Corporations Act marked the beginning of a gradual formalization of the "political nation," and an expansion in the number of those able to vote in local and parliamentary elections. Within and outside parliament, politics became more party-based and organized. A distinction emerged, for instance, between "the Government" and "the Opposition"; and local party groupings were eventually integrated on a mass scale via the formation of national Conservative (1867) and Liberal associations (1877).[53] Meanwhile, "public opinion" became an established point of reference in the 1820s, just as the press began to expand. In 1824, there were 244 local and national newspapers in the United Kingdom; by 1886, there were 2,093—a near ninefold increase.[54]

Theorists of modernity have generated various antinomies to capture the dynamism of this process, among others the dual imperatives of "mastery and autonomy," the twin authorities of "science and liberty," and the interplay of "bureaucracy and democracy."[55] Never a consistent theorist of power, in a lecture he delivered in the mid-1970s Foucault described an analogous antagonism:

> From the nineteenth century until the present day we have then in modern societies, on the one hand, a legislation, a discourse and an organization of public right articulated around the principle of the sovereignty of the social body, and we also have a tight grid of disciplinary coercions that actually guarantees the cohesion of that social body. . . . In modern societies, power is exercised through, on the basis of, and in the very play of the heterogeneity between a public right of sovereignty and a polymorphous mechanics of discipline.[56]

Doubtless the dynamic might be formulated in more than one fashion. The basic point here is that modern governance extends to practices and ideals of popular inclusion and public activism and accountability, as much as to practices and ideals of expert knowledge and bureaucratic administration. Put another way, modernity involves multiplying agents of governance, who form—and indeed are thought of and posited—as both objects and subjects of power.

This is not to deny the advent of increasingly specialist forms of expertise and institutionalized systems of officialdom. Rather, it is to

suggest that this needs to be considered as part of a more shared, entangled, and routinely messy process of governing that also relied on the agency of MPs, civic activists, councillors, and members of the public. This certainly made for conflict. If freedom inhered in freedom from disease, and so a whole series of disciplinary and costly interventions, then freedom also inhered in fiscal restraint, domestic privacy, the rights of property, and local self-government. Yet, crucially, this did not preclude cooperation and the formation of coalitions between agents, and at various levels of governance, without which nothing could have been done. It worked both ways. In short, the modernity of England's modern public health system resides in the way it was composed and forged in these multiple relations.

Times of Governance

The final dynamic concerns the temporality of Victorian and Edwardian public health, and the way it assumed and practiced what might be called, after Reinhart Koselleck, modern-historical time: or more specifically, the kind of evolutionary and civilizational time that began to develop during the second half of the eighteenth century, before flourishing in the nineteenth.[57] That the Victorians looked backward as much as forward is well known, making for a "mixed modernity," as Billie Melman has put it, composed of complex accretions of multiple futures and multiple pasts.[58] In terms of the former, we find invocations of progress and immense future possibilities; in terms of the latter, increasingly elaborate recoveries of the past, from the discoveries of geology to new histories and idealizations of the ancient, medieval, and early modern worlds. And what Jerome Buckley once termed the "triumph of time" was also manifest in new practices: among others, the advent of a public culture of museums and exhibitions; organized, professionalized archiving; and the growing popularity of personal autobiography and diary keeping.[59]

All of these developments marked a profound extension of temporal perspective on the present, one that came to underpin all aspects of life and thought. Governing was no exception. As Koselleck argues, from roughly 1800 onward, historical time became central to governmental thought and action, informing the entire "social and political vocabulary": "Since then, there has hardly been a concept of political theory or social programmes which does not contain a coefficient of temporal change, in the absence of which nothing can be recognized, nothing

thought or argued, without the loss of conceptual force. Time itself becomes a title of legitimation open to occupation from all sides. Specific legitimating concepts would no longer be possible without temporal perspective."[60] One instance of this, he suggests, is the proliferation of modern "isms" that occurred in the nineteenth century—"conservatism," "liberalism," and "socialism," among them—and how each was tied to particular readings of history.

Yet, as Koselleck and others have argued, this deepening of temporal-historical perspective was only half of a complex dynamic, for it was also bound up with quite the opposite: namely, "time-space *compression,*" and the assumption that all spaces, no matter how far apart and whatever it is they contain (particular people and practices, for example, or traditions and customs), inhabit the same clocked, chronological present.[61] Linked to a growth of global connectivity and increased travel, trade, and migration, this temporal dynamic was first developed in the civilizational and proto-anthropological thought of the Enlightenment. Koselleck describes how societies from around the world were increasingly subject to synchronic comparison *and* diachronic ordering, thereby generating ideas of relative "advance" and "backwardness." "From the eighteenth century on," he writes, "it was possible to formulate the postulate of acceleration; or conversely from the point of view of those left behind, the postulate of drawing level or overtaking. This fundamental experience of progress, embodied in a singular concept around 1800 ['Progress'], is rooted in the knowledge of noncontemporaneities which exist at a chronologically uniform time."[62] Not everyone, that is, progressed at the same rate or in the same fashion, even if they inhabited the same ticking, empty chronological present: a given year, month, day, or hour. One might even move backward, regress, and degenerate.

Public health in Victorian and Edwardian England was governed in just this kind of time. Perhaps writers and poets enjoyed epiphanic moments; perhaps Christian evangelicals invoked apocalyptic crises now and then.[63] But when it came to governing public health and figuring out a way forward, it was this form of time that was crucial. Modern-historical time functioned as a kind of operative assumption, and was embedded just as much in the day-to-day work of governing systems, as in the ideals and principles that created and sustained these systems. Crudely, on the one hand, public health was rooted in temporal depth and extension, most of all the simple but crucial assumption of progress and the possibility of leaving behind a filthy, disease-ridden past. Progress was variously defined and the means to secure it were

always in dispute. Nonetheless, it formed the principal horizon of thought and action, and was most manifest in the development of a great archive of official "blue book" documentation—central surveys, bureaucratic returns, and the reports of royal commissions, for instance—recovering what had been done and what might be done, and investigating good and bad practices, both at home and abroad. Put another way, it was realized and materialized as an unprecedented investigatory labor into spatial-temporal variations of practice, and existing problems and possible solutions.

On the other hand, however—if also as part of the same dynamic—Victorian and Edwardian public health was rooted in a "shrinking world" of technological infrastructures and administrative systems that assumed the emptiness and homogeneity of time and space, while compressing their interrelations: or more simply, a world of growing speed and acceleration that combined chronological intensity and spatial reach. This process of shrinking is normally associated with the introduction of steam-powered transportation (steam ships and railways), and the advent of imperial news systems and electrical telegraphy, all of which helped to secure increasingly rapid flows of information and people.[64] But it was just as much an administrative and a bureaucratic phenomenon. As we shall see, the governance of public health participated in this kind of compression, most of all in the institutionalization of systems for processing and coordinating change. Notable instances explored here include the development of permanent administrative infrastructures relating to vital statistics, official inspection, and the so-called stamping out of infectious diseases. And yet, just as they performed this function, these same systems also assumed an extended or deeper historical dimension, in that they helped to secure grander narratives of sanitary progress and human possibility. The point, once more, is that we need to grasp the two together, as part of a dynamic, modern process of both temporal extension and compression.

The two elements introduced above—displacing the state, and thinking in terms of modern dynamics, rather than contingent outcomes—might seem like an overly theorized way of seeking to re-engage a basic question: what was modern about modern public health in Victorian and Edwardian England? The book also comes at a time when *modernity* is under immense pressure as a term of historical analysis. As James Vernon has argued, since the 1990s—when the term eclipsed *modernization*

as the category of choice—*modernity* has been used to capture so many conditions, processes, peoples, and moments that historians have begun to question its utility.[65] It is no coincidence that the interpretive and periodizing category of "the Victorian" has also come under scrutiny, as historians have weighed up whether some kind of modern transition occurred in the 1830s and 1840s, or in the 1880s and 1890s (the argument here clearly suggests the former).[66] Yet, it is surely worth revisiting the question of the modernity of modern public health, not only in light of extensive revisionist scholarship, but also given how much the term *modern* continues to structure existing narratives regarding the when, how, and extent of historical change. In any case, as an exercise in history, the key test is the empirical one, and whether the argument formulated above can do any useful work in terms of shedding new light on what happened, when and how.

This book makes no claim to comprehensive coverage. It does not pretend to match the scope of works such as F. B. Smith's *The People's Health,* or Anthony Wohl's *Endangered Lives*.[67] Rather, it presents a series of detailed thematic studies that cover some of the core areas and agents of "public health," as it was then defined as an administrative problem. Briefly, the six main chapters explore the following: the organization of public health as a national system of governance composed of local and central parts; the use of statistics to measure the progress of this system; official bureaucracy and the practice of sanitary inspection; the building of sewerage and waste disposal systems; stamping out, and responding to outbreaks of infectious disease; and finally, washing the body and personal cleanliness. Notable absences, then, include smallpox vaccination and the regulation of air, food, and water—if not necessarily, it might be said, the regulation of factories and industrial health, which remained largely a Home Office responsibility, and the medical functions of the poor law (not that this lack of system and integration went unnoticed at the time, as we shall see).

The purpose, however, is not to account in depth for each and every aspect of public health, at each and every level. No account has and no account could—at least not while attending to all of the complex twists and turns of policy formation and implementation. If the book aspires to any sort of comprehensive scope, then this is in two respects. The first is in terms of grasping the multilayered modernity of Victorian and Edwardian public health, and the way it was forged and performed not just through struggles concerning the organization of the system as a national whole, but also in terms of struggles at the local and personal

levels. The book thus begins with a chapter on "sanitary centralization," and ends with a chapter on intimate acts of bodily hygiene. The second is in terms of the systemic abundance of public health; which is to say, the sheer diversity of systems that made up public health as a modern field of governance, from those of a more bureaucratic and administrative nature to those of a fully technological and material sort.

Ultimately, this is the kind of history offered here. The book is not a cultural, political, or social history; nor again is it an environmental, administrative, or technological history. Rather, it is a history of systems, and in particular a history of the modern ambitions and frustrations that governed their making and remaking in Victorian and Edwardian England under the mutable rubric of "public health." And in so doing, it argues for the utility of writing history in just this fashion—a point we return to in the concluding chapter.