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EDWIN CHADWICK AND
THE PUBLIC HEALTH MOVEMENT
1832-1854

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AND THE PUBLIC
HEALTH MOVEMENT

1832-1854

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TO
MY MOTHER AND FATHER

PREFACE

It is a pleasure to record my thanks to the many people who have helped me in the writing of this book. I am indebted particularly to Professor J. A. Hawgood and Professor W. H. B. Court, both of the University of Birmingham, for much advice and encouragement while I was preparing the Ph.D. thesis of which this is a revised and shortened version; to the Librarian of University College, London, for permission to work on the Chadwick papers, and to his staff for their ready assistance over many weeks; to the staffs of the Record Room, County Hall, Westminster, the British Museum Reading Room and Department of Manuscripts, and the Public Record Office; to Professor S. E. Finer, of the University College of North Staffordshire, for some suggestive comments; and to my colleagues, Mr. D. A. Rees, who read part of the proofs, and Dr. J. Alun Thomas, who read the whole.

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Bangor,
May 1952

R.A.L.

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PART ONE

THE PUBLIC HEALTH CAMPAIGN

1832 - 1848

CHAPTER I

SOMERSET HOUSE

FEW men have done so much for their fellow-countrymen as Edwin Chadwick, and received in return so little thanks. The neglect is partly the result of ignorance, and he shares it with other civil servants of the first rank, such as Charles Trevelyan and James Stephen, whose great public work is shrouded in the silence and anonymity of the service. To the historian of the nineteenth century Chadwick is a driving force whose presence is rather deduced from its effects than observed in action. But Chadwick's reputation suffers from another cause: a hatred of the man and his work, widespread in his day, and colouring even now the impressions of him formed by a later generation. From prejudice and half-knowledge has grown the Chadwick legend—of a stiff and arrogant figure, doctrinaire in ideas, ruthless in methods, whose eternal monument is the Poor Law Bastille. With his fertile schemes for extending the frontier of State intervention he embodies the imperial ambition of the civil service. He is the suspected channel of foreign ideas, derived from German absolutism and French centralisation, alien transplantings into the free soil of the British constitution. He is, in short, the very type of the bureaucrat, whose ideal government is a vast Panopticon, where every individual lives and works under the austere benevolent eye of the State official, the spontaneous activities of each directed by a controlling intelligence to some distant social end.

There is some basis to this legend, as to every other. It cannot be denied that Chadwick possessed certain qualities of character which during his lifetime isolated him behind a hedge of antipathy and distrust. He was a bore, a really outstanding specimen of bore in an age when the species flourished. He was too keenly aware of his own merits; while, on the other hand, he had no patience with fools, and his definition of a fool was a very wide

one, taking in, as it did, nearly everybody who disagreed with him. With a wholesome suspicion of power wielded by others he managed to combine a boundless confidence in the benefits of power in his own strong hands, and every scheme drawn up by Edwin Chadwick seemed to contain a provision at some point for giving more power to Edwin Chadwick. All this must be granted; but it would be unjust to write off the hostility he aroused as no more than the necessary reflex of his personal faults. If he was for so long one of the most hated men in the country, it was far less because he was overbearing and ambitious than because his investigations had left starkly displayed the tainted sources of many respectable fortunes. He stirred up a great deal of mud, and it is a tribute not a reproach that so much of it was thrown back at him by his critics. Other men were more in the public eye, commanded greater respect, and certainly inspired deeper affection, but no man, not even Lord Shaftesbury, has more solid achievements in the field of social reform to his credit. The career of Edwin Chadwick may well serve as the classical illustration of a historical truth too often neglected, that the shaping of events may often owe less to the Parliamentary gestures of the statesman than to the advice and activity of some obscurely influential figure, unnamed and unpraised, in a Government office.

Edwin Chadwick was born on 24 January 1800 in the village of Longsight, near Manchester. His grandfather, "good old Andrew Chadwick," founded the first Sunday school in Lancashire, and was the oldest Methodist in England at his death in 1815 at the age of ninety-three.¹ His father, James Chadwick, a man of some scientific and artistic ability, is said to have given lessons in botany and music to John Dalton; an active Radical, he knew Tom Paine and was a friend of the abolitionist, Edward Rushton. He edited the *Manchester Gazette*, and later kept the *Statesman* alive during the imprisonment of its editor, David Lovell. Edwin's mother we know only by his recollection of her as a "sanitarian *pur et simple*." It is certain that his sympathies and understanding were conditioned by a home in which the distress of the lower classes and the means of relieving it were earnestly discussed, but his mind took no direct impress from the Nonconformist and

¹ Alice Boardman to E. C., n.d. (c. 1878).

popular Radical influences amongst which he was raised. James Chadwick could not have read with any pleasure his son's gibes at Radical demagogues, while "good old Andrew" would have been horrified to hear his grandson rank the Dissenting chapel with the beershop and the Trade Union as the triple corruptions of the poor.¹

From the village school at Longsight, Chadwick went to Dr. Wordsworth's boarding-school at Stockport, but at the age of ten he came to London, where he was sent to private tutors for instruction in the classics and in languages—French, Italian, and Spanish. At fourteen or fifteen he was put into an attorney's office. We may judge that his formal education was fragmentary, and his self-planned studies severely technical and utilitarian. For a career in the public service, he would undoubtedly have said, his equipment was none the worse for that. What was literature after all but the study of idlers who read for amusement, and history but "one great field of cram, of reliance on memory, and of dodging?" As for the classics, if they were brought out as new productions and sold in Holywell Street, the authors and booksellers would be prosecuted by the Society for the Suppression of Vice.² He had the deepest contempt for the aristocratic notion that no ideas of value could be expected from anybody who "had never been at either university, written a nonsense verse, or scanned a line of Horace."³

¹ Details of Chadwick's early life are meagre. His father emigrated to America about 1837 with the younger members of his family by a second marriage. The nature of the relations between Edwin and his family may be judged from the following letter, written towards the end of 1852 when it was clear that the General Board of Health was nearing its end:

"Under the circumstances I wish you to warn those whom it may concern of the uncertainty of the continuance of any income from me;—the only thing which has ever seemed to me to concern them. Except from Julia and yourself, and from my brother James, almost the only letters I have received from any one member of my family, since I arrived at man's estate, any other than spunging applications cries [of] Give, Give; never a personal civility, a message or an act that shewed sympathy for my labours, or couched with any view to give me pleasure, nothing but indirect or direct pauper importunities." (E. C. to Andrew Boardman.)

² "On the Subject Matters and Methods of Competitive Examinations for the Public Service," paper to the British Association, in *Journal of the Society of Arts*, vol. x, p. 725, 6 October 1862. *Subjects for Competitive Examination*, pamphlet, 1890.

³ "On Life Assurances," *Westminster Review*, February 1828, vol. ix, p. 407.

Chadwick was admitted to the Society of the Inner Temple in 1823, and, while continuing his reading for the Bar, earned a slender living as reporter to the *Morning Herald*. By 1825 he was on good terms with the brilliant group of younger Utilitarians, and was frequently invited to dinner at J. S. Mill's to meet George Grote, J. Eyton Tooke, James Roebuck, and John Graham. He debated morals and metaphysics in a discussion class at Grote's; he heard John Austin lecture at the new College in Gower Street; daily he encountered the seminal ideas of Benthamism, and Utilitarian theory gave direction and vigour to his thought. Of equal significance for the future, he met Dr. Southwood Smith and Dr. Neil Arnott, and at University College he became familiar with current medical doctrine by discussions with students of the best medical school in Europe.¹ In politics and religion alike, he began to apply the same test, judging all activities by the volume of social benefit resulting from them. He turned his back on Wesleyan Longsight and professed himself a member of the Church of England—the church of “Jeremy Taylor, of Bishop Berkeley, of Paley”²—because in his experience Anglican priests, with their savings banks and clothing clubs, did more practical good amongst the poor than the Dissenters or the Roman Catholics. In the political sphere he watched with sceptical detachment the clash of parties and the manoeuvrings for Parliamentary majorities. “I am a zealous advocate of all social improvements,” he declared, “and am therefore an ally of any people by whom improvements would be made.”³ In the public health campaign a few years later he sought his friends in both camps, looking to paternal Tory principles to restrain the anarchic tendencies of Radical individualists, and to Radical irreverence to loosen the bonds of Tory traditionalism.

The struggle for recognition in the hard schools of journalism and the law marked him for life with the self-consciousness and truculence of the man who owes everything to his own exertions—

¹ “From discussions with them I derived a strong conviction of the superior importance of the study (as a science) of the means of preventing disease, and I was the better enabled to perceive some of the important relations of the facts, partially expressed by vital statistics, which were brought before me in my public investigations.” (E. C. to Dr. R. Willis, 31 July 1844.)

² E. C. to Dr. Buckland, 17 January 1844.

³ E. C. to Edward Gulson, July 1837.

the self-made man, proud of his creation but sensitively aware of its imperfections. In Fleet Street and the Inner Temple he learned habits of tremendous industry and methods of investigation which were later to serve him in good stead; and with them he acquired a cocksureness of manner which, coupled with a native arrogance, set people's teeth on edge. At thirty his aim in life was not yet settled, and his abilities, sharpened by application and a hard and varied upbringing, were awaiting their opportunity. He had been called to the Bar and was making a name in the Courts. Albany Fonblanque had appointed him sub-editor of the *Examiner*, from whose columns a raking fire was directed at the Lords, the Church, the magistracy, and the ineptitudes of the Wellington ministry, from a popular Radical angle with which Chadwick was not always in sympathy. He had caught the eye of Bentham and Francis Place with a couple of excellent articles on French Medical Charities and Preventive Police, which he had contributed to Blanco White's *London Review*, a ponderous quarterly which foundered after two issues. Before a Commons Committee he had defended his view that the primary object of a police force was the prevention of crime, the detection and apprehension of the guilty being of subordinate importance. He had been prominent in drawing up petitions and Bills for Joseph Hume and Edward Bulwer in their attack on the Stamp Duties or “Taxes on Knowledge,” a subject which—he asserts—had been first broached in Parliament as “Mr. Chadwick's question.”¹

Early in 1831 he met Jeremy Bentham and accepted an invitation to become his secretary. “A queer old Hermit, half gone in dotage, sinking through it into the grave,”² haunted by gloomy dreams and the dread of blindness, the philosopher was still hard at work on his drafts and codifications. Many men of influence and ability had hurried from Queen Square, their minds illumined by some bright project for putting the world in order; but Bentham regarded few of them with more esteem than this stern disciple of his old age. The gentle recluse, devising the widest schemes of benevolence that the philanthropist could propose in the guise of the most hard-headed self-interest that the

¹ MS. notes, n.d., on his own career.

² Bentham to D. O'Connell, 15 February 1827; *Collected Works*, ed. Bowring, vol. xi, p. 2.

economist could desire, tapped some deep spring of feeling in Chadwick which rarely, if ever, broke the surface in later years. "Bentham was his ideal, his guiding star, and had called forth all the tenderness of his nature," writes Chadwick's daughter. "He could not bear the most innocent joke about Bentham's peculiarities."¹ But Chadwick could not become the echo of another, however venerated. When Bentham offered him an annuity if he would undertake to devote his life to preaching the doctrines of Felicitarianism, he refused the offer, though it must have had its attractions for a struggling lawyer. He always made it clear that his respect for Bentham did not imply a blind acceptance of Bentham's doctrine. He was exasperated by those who believed that his administrative ideas were drawn from the philosopher, and would point out sharply that writings he had published before those of Bentham showed the independence of his own views—especially on sanitary questions.

Turning the pages of the *Constitutional Code*, Bentham's last and most ambitious work, it is not difficult to detect the extent of Chadwick's debt to him; nor is it possible to find a better illustration of the difference between the methods and achievements of the two men. Chadwick, who was no political philosopher, took his theory ready-made and unexamined from Bentham. At the beginning of the *Constitutional Code* Bentham lays down three fundamental principles. The first defines the object of the legislator, which is to secure the greatest happiness of the greatest number; the second states that in individuals "self-regard is predominant," or "self-preference has place everywhere." The business of the legislator is to reconcile the first principle with the second, to build the structure of society upon a psychology of atomic individualism. This is effected by the third of Bentham's principles, the "means-prescribing, or junction-of-interest-prescribing principle," according to which the laws and administration of the community should be consciously planned to ensure that in pursuing his self-regarding activities the individual must promote the welfare of his fellows.² The *Constitutional Code* is thus a beautifully constructed mechanism of checks and incentives for the organisation of a mob of conflicting egoisms. Here is the

¹ Marion Chadwick to Mrs. Aubrey Richardson, 24 October 1928.

² *Constitutional Code; Collected Works*, vol. ix, pp. 5-8.

theory implicit in Chadwick's administrative reforms, the justification for endowing the State with indefinitely extensible powers to ensure that the interests of the individual and the ends of society shall be identified—the justification for aggressive Government action to protect factory children and railway labourers; to supply a legal minimum of relief for the able-bodied pauper and institutional care for the sick, orphaned, and aged; to put under public regulation the supply of water and the burial of the dead; to cleanse parishes and municipalities of corruption and central departments of nepotism and patronage; to destroy, adapt, create institutions as the principle of utility might dictate. Here also are the blueprints for the Utilitarian State—the new Ministries for Health, Education, Justice, Indigence Relief, and Interior Communication; the administrative areas prescribed by technical necessities not historical sentiment; the officials selected for their tried and proved "appropriate aptitudes." Here are the powerful central departments, supervising, initiating, and inspecting, publishing regular reports on their activities, collecting statistics and information from the localities, vigilant for every opportunity to exercise their "melioration-suggestive" functions.

In its astonishing prescience, its inexorable detail, and its neat joinery of efficient means to useful ends, the *Constitutional Code* is the most sustained and fruitful effort of the practical imagination in the literature of government. But that it is a work of the imagination should not be forgotten. It is limited by what Bentham could see and hear from Queen Square. It is limited by the emotional prepossessions of a philosophical recluse of upper middle class origins, comfortable in his means and his habits, remarkably equable in temperament, who seems to have felt no stronger passion than a kind of intellectual irritability at the twisted logic of his opponents. The observation and experience of one man, even a man of genius, form too narrow a basis for the massive edifice Bentham built upon them. A philosopher at his desk could erect on paper his construction of pure intellect, building course by course from *a priori* foundations. He could postulate a Health Minister, ranking in importance before even the Finance Minister, and endowed with whatever powers his philosopher-creator might wish to give him, from the supervision of medical officers of the Army, Navy, and Indigence Relief

departments to the maintenance of hospitals and the inspection of prisons, schools, and Poor Law establishments. This ideal Minister would, of course, be charged with a comprehensive range of minutely defined duties—an “aqua-procurative” function; a “malaria-obviating” function; a “health-regarding-evidence-elicitative-and-recordative” function, involving the collection of reports from local registrars, hospitals, and the establishments under the various Ministries; an “appropriate-publication” function enjoining that the “utmost publicity” be given to the activities of his department.¹ It was Chadwick’s task to test these *a priori* notions against the evidence, to work upwards from the day-to-day facts of social circumstance, and to find in actual case histories the arguments to convince ratepayers and editors and Ministers of the Crown. “I may observe,” he says, “that in my service I have never followed any one, not even Bentham, but have deduced my conclusions not even from Bentham’s but solely from close and important collections of evidence.”²

For twelve months Chadwick lived in Queen Square, nursing Bentham through his last illness. Before his death, Chadwick laid before him the outline of the Poor Law proposals, “and he was satisfied with the proofs I gave him.”³ In his will Bentham bequeathed to his secretary a small legacy and part of his library of jurisprudence, referring to him with affection and hoping that he would continue the grand work of codification.

In 1832 came the decisive point in his career. Nassau Senior, knowing him from his contributions to Blanco White’s quarterly as an unusually well-informed student of social problems, invited him to assist the Royal Commission which had just begun its inquiry into the Poor Laws. Senior had the ear of the Government, and his invitation opened to Chadwick the doors of Whitehall. It was no civil service fledgling, docile, well-bred, and ignorant, however, that Senior thus introduced, but an assertive, rather crude, lawyer-journalist, with habits of mind already fixed, who for years had been elaborating theories of positive Government action and was eager for the opportunity to put them into practice. From the first he was an unwelcome and critical alien.

¹ *Constitutional Code; Collected Works*, vol. ix, pp. 443–5.

² *On the Evils of Disunity in Central and Local Administration* (1885), p. 2, footnote.

³ E. C. to H. D. Macleod, 19 January 1860.

“All those who like Lord Melbourne are for letting things ‘shake right,’ as he expressed it, all those who in the sight of any amount of evil, use the half informed economists’ cry of *Laissez faire*, set me down as mad.”¹ Patronage, which filled the public service with the random selections of favour or influence, had bred a race of timid, *fainéant* officials, who looked with deep uneasiness upon investigations into social evils which must lead to activity on their part. They took the machinery nearest to hand and followed the advice which promised least trouble, clinging to old forms and worn routines to avoid the labour of inventing and mastering new. “Why can’t you leave it alone?” Lord Melbourne would ask querulously when a restless subordinate suggested that something should be done.² To the advocates of “leave it alone” Chadwick was a dangerous eccentric. He was wild, unsafe, visionary, revolutionary even, this man with his ingenuity in devising novel administrative machinery, his expositions of the preventability of disease and crime, and his irreverent scorn for the oligarchic doctrine that the most important qualities of a man are his name and his stock. Above all, these Government servants, Ministers and departmental heads alike, were alarmed by Chadwick’s faith in Government. Everybody knew that “Government does everything badly.” From the beginning Chadwick, the first great civil servant with a professional sense of the dignity and proper functions of the public service, set himself to remove that slur. He was none too tactful about it. “Sir,” he remarked with a truly Johnsonian grandeur to young Lyon Playfair, “the Devil was expelled from heaven because he objected to centralisation, and all those who object to centralisation oppose it on devilish grounds!”³

Laissez faire in economics was the obverse of Melbourne’s “leave it alone” in government, and Chadwick’s advocacy of positive Government action was logically combined with a rejection of the orthodox economic theories of the day. When he began his Poor Law inquiry economic science was a remote, deductive, Ricardian structure, proceeding from premiss to conclusion with the inevitable progress of a geometrical proof.

¹ E. C. to the Rev. Sidney Godolphin Osborne, 16 April 1847.

² MS. fragment, n.d.

³ W. Reid, *Memoirs and Correspondence of Lyon Playfair* (1899), p. 64.

He first abandoned the method, and then found himself abandoning the principles and the deductions from them. There were, he told the Political Economy Club, two schools of economists: the "hypothesisists," who reasoned deductively from unverified or imperfectly verified hypotheses which they called principles; and the "school of facts," who preferred to make inductions from the facts, incomplete though these might be. Unattractive and laborious as the latter was, it was the method he favoured. Working with hypothetical cases offered the advantages of ease and simplicity, and they could readily be shaped to fit any system the manipulator pleased; but the practice was open to the grave objection "that we are apt to imagine and to use conjunctions of circumstances which never do occur as assumed and from them to deduce consequences which never do happen as deduced, and never will so happen." The theorist might, for example, "aggravate human misery by deducing it upon hypothesis to be irremovable," the result being "to mischievously misdirect human attention: to excite false alarms, to give extreme pain."¹

This is the note sounded time and again by Chadwick—the scorn for statesmen and administrators who continually arrived at practical decisions in incredible ignorance of the grounds on which they could safely be made; the insistence that legislation must be founded on an ample induction, an inquiry safeguarded as in a scientific investigation by every security for the attainment of objective truth. The proper place for the economist or administrator, who was preparing the ground for legislative action, was in the street and workshop; the proper method was to get first-hand acquaintance with the problems and persons to be dealt with, not to view them dimly through a mist of words and preconceptions. What Chadwick thought of an investigating body which sat round a table in London and listened to paper evidence and the representations of selected witnesses, he revealed in a pungent letter to the chairman of a Royal Commission which had been trespassing without due deference in a field he regarded with a proprietary eye. "You have been dependent upon what others bring before you. The merit of my procedure for investigation is, that I have the least of such dependence. I do not only

¹ "Population Question. Two schools of political economy: the geometrical reasoners and the reasoners from facts," MS. draft, c. June 1845.

the work of an attorney but the work of an attorney's clerk. I have gone to see the places myself . . . and I have cross-examined the witnesses there on the spot."¹ The procedure he favoured was that of an open inquiry by a commission of experts, circulating detailed questionnaires and conducting local inquiries by itinerant investigators. This method had two advantages. First, by such inquiries the curious compound of conjecture, prejudice, and arbitrary assumption which went by the name of political and economic theory would be replaced by a body of tested knowledge, based on experiment, accurate observation, and verifiable evidence. Secondly, there would no longer be justification for the dangerous inaction of Government, which was the result partly of an honest bewilderment about the nature of the evils and the means of remedy, partly of apprehension about the public attitude to any proposals that might be made. A full and explanatory report from the commission would supply all the facts necessary for the framing of legislation and the conduct of Parliamentary debate; while the public inquiry, giving opportunity for all parties to be heard and all objections to receive their due weight, would ensure that the will of the country had been consulted—and instructed also, since the education of opinion by the inquiry was as important as the exploration of the facts.²

The value of Chadwick's influence in the field of social investigation during the twenty-two years of his official career can hardly be over-estimated. His method was not original. John Howard had made the round of the prisons with measuring tape, weighing scales, and notebook, and had refused to take any statements on hearsay, seeking to confirm everything by cross-questioning keepers, turnkeys, and prisoners; Bentham had laid it down that legislation is "an affair of observation and calculation," and that it should be based, not as hitherto "upon the quicksands of prejudice and instinct," but upon "the immovable basis of sensations and experience"³—the Poor Law inquiry of 1832-4 was conducted, probably at Lord Brougham's suggestion, by itinerant commissioners, as was also the inquiry of the Municipal

¹ E. C. to Lord Bramwell (Chairman of the Royal Commission on Metropolitan Sewage Discharge, 1884-5), 3 March 1885.

² Cf. *A paper on the chief methods of preparation for Legislation . . . read at a special meeting of the Society for Promoting Amendment of the Law*, 1859, *passim*.

³ *Theory of Legislation*, ed. C. K. Ogden (1931), pp. 10, 102.

Corporations Commission of 1835. But the full development of the method, and in particular its use as a weapon to combat the opposition of doctrinaires and hostile interests, is peculiarly Chadwick's achievement. In addition to the models afforded by his own unequalled series of reports, he was ready with guidance to other investigations, such as the Children's Employment Commission of 1840. And, under the General Board of Health, the procedure of preliminary inquiry in the locality was used by Chadwick's Inspectors to clear the ground for the application of the Public Health Act.

For Chadwick everybody had his story, his facts, his fragment of experience, with lessons to instruct the acute and sympathetic investigator. The working-class housewife could tell him of her market purchases, the quick succession of her confinements, her ineffectual attempts to keep her house clean without water and maintain the health of her family in the midst of damp and filth. The young criminal in the prison cell could describe how he fell to the temptations of the flash-house. The gravedigger had stories of the horrors of the churchyards, and the slaughterer in Clare Market could suggest how disease might be spread by nasty feeding. Even the journeyman mason with his ample whiskers could give support to the idea that a beard was not only an addition to manly beauty but also had a utilitarian value as a protection against dust. Chadwick talked to them all, and what they told him went down in his notes or his memory, to reappear in some report as buttress to an argument, or as a clinching illustration in a speech or letter. He let them speak for themselves in copious extracts, and his favourite method in the descriptive portions of his reports was to present his facts in the words of his informants, knitting their accounts together with a few remarks of explanation and comment. There was usually, however, an admixture, more or less preponderant, of Edwin Chadwick in that evidence. He took a stand on the facts very quickly, sometimes too quickly; he soon made up his mind what he wanted to find out, and he used both the rein and the spur in guiding his witnesses towards a conclusion he already had clearly in mind. It was not for nothing that he had read for the Bar. The ideal of scientific objectivity which he set before the social investigator was not easy for any man to attain; for Chadwick himself, with his training and temperament,

it was doubly difficult. Charles Darwin had an excellent habit of making an immediate note of every fact he encountered which seemed at variance with his own theories; because, he said, he was sure to remember those facts which supported his case, but was likely to overlook those facts he would like to forget. Had Chadwick done the same he might have trod more cautiously on debatable ground, and lost something of that dogmatic self-assurance which at times irritated his best friends.

Revolutionary conclusions emerged from this close examination of the facts. Every one of his inquiries, says Chadwick, had the result of reversing the principles which the Government, the economists, and the general public had adopted, and on which they were prepared to legislate; and the findings, he adds, were most of them new to himself as well as his colleagues.¹ In controversy this close acquaintance with the facts gave him the moral and intellectual ascendancy of the man who had been and seen for himself. "John Stuart Mill always deferred to me on any question I had examined because as he said, I always got my information first hand, whilst he could only get it second hand or from books."² He would ask acquaintances round to his house at Stanhope Gate for a "little sanitary chat," and over breakfast or an early dinner would submit them to his "inquisitorial thumb-screw," as one visitor described it with rueful admiration.³ Not that the flow of information and experience went all one way; he gave better than he got; and he was always ready with advice to the Chairman of the Board of Guardians who wanted to tighten up the administration of his Union or the enlightened land-owner who was thinking of putting up some improved cottages for his farm labourers. If you were in doubt about the right depth to lay tiles for drainage, or wanted the name of a man who would plan a farm or a cemetery on the most approved models, or were at a loss for a set of clauses for a Bill or some telling figures for a speech, Chadwick could be depended upon to help. If he did not know, he could always put his hand on somebody who did. "You know all the clever fellows and who can do everything

¹ "Representative Reform; jottings down of a letter on a commission," MS., n.d. (c. 1859).

² E. C. to Lord Bramwell, 3 March 1885.

³ George Sumner to E. C., n.d.

better than anybody else," wrote James Morrison, in difficulties with his Railway Committee.¹ "Whenever I see a stupidity going on, I think of you, of course as you can imagine," said a German economist, "because you are the man to bring the proper remedium."² Altogether, as J. S. Mill remarked, there was nobody quite like Chadwick for being practically useful.³

To the Commissioners, engaged in unearthing the abuses of the old Poor Law system, Chadwick was presently indispensable; and his colleagues, uneasily turning over the fragmentary and inadequate schemes so far devised, listened with relief to a voice which spoke with so confident a note of authority. The most influential figure on the Commission was the urbane Oxford professor, Nassau Senior, the Maynard Keynes of his day, to whom the Government looked as the leading interpreter of the science of Ricardo and Malthus. When Chadwick joined the inquiry, Senior had not conceived any practicable way of offering relief to able-bodied paupers which would not bring all the demoralisation of Speenhamland in its train, and in consequence, as a draft of 1831 reveals, he could see no remedy short of a heroic surgical operation to cut away in its entirety the corruption of the allowance system.⁴ Nor had he formulated any suggestions as to the machinery of administration. By September 1832, however, Senior was urging on the Government the introduction of the workhouse test; and in a letter to the Lord Chancellor in January 1833 he outlined proposals for a central Commission of three, a body of itinerant inspectors, paid overseers, and compulsory unions of parishes.⁵ In brief, Senior had capitulated to Chadwick's arguments that a legal provision of relief to the able-bodied paupers was necessary, and that it could be given in a form which would neither undermine the character of the recipient nor sap the position of the independent labourer; and, further, he had adopted unreservedly Chadwick's administrative scheme. Chadwick's energy and self-assurance, his bold prescription of remedies, and the weight of evidence he had assembled with

¹ James Morrison to E. C., 22 March 1845.

² T. Garnier to E. C., n.d.

³ J. S. Mill to E. C., 1846.

⁴ M. Bowley, *Nassau Senior and Classical Economics* (1937), p. 317.

⁵ *Ibid.*, pp. 317, 319.

extraordinary rapidity, had all worked with the utmost success on Nassau Senior, who possessed, as Dr. Bowley has shown, a flexibility of outlook which belies his reputation as a doctrinaire of the *laissez faire* persuasion. Chadwick was now asked to prepare the heads of a Bill, based on the principles he had suggested.

From the outset he was in revolt against the principles on which philanthropists and economists had hitherto based their attitude to pauperism. He rejected out of hand the thesis of the evangelicals, voiced eloquently by Dr. Chalmers, that all statutory systems of relief were pernicious, and that public doles should be replaced by the alms of the charitable. He rejected with equal scorn the sentimental paternalism of the country Justices, who did not doubt that the agricultural labourer "must be poor," and must live in perpetual dependence on the parish rates. But his main battle lay with the "hypothesists." To them the whole inquiry appeared superfluous, since it was obvious that the cause of pauperism was the growth of population beyond the means for its support. From their *a priori* law of population, they went on to deduce that the labour market was saturated, and the paupers had been squeezed out by the competition of their fellow workers. Look at the facts, retorted Chadwick, and observe that they in no way bear out this grim picture of a population pressing right up to the margin of subsistence, and in their struggles pushing the less fortunate over that margin into starvation and misery. From talks with aged labourers in the country parishes he learned that within the span of their experience their conditions had greatly improved; their real wages had risen and were still rising, and their expectation of life was longer now than ever before. It was true that in some areas dangerous congestions of pauperism existed, but, viewing the country as a whole, there was no general surplus above the average demand for employment throughout the year.

As he put it, the existing mass of pauperism was not a disease attacking the very structure of society, but merely a disorder of its functions, which could be corrected by a proper regimen. If the attractions of relief were lessened by cutting it to subsistence level and accompanying it by an irksome discipline; if it were made impossible for farmers to get cheap labour at the public expense; if the area of the labour market were widened by tearing down the

fences of the Settlement laws, and by encouraging the emigration of labourers from the heavily pauperised South to the industrial North—if this were done, asserted Chadwick, all those apparently surplus labourers would be rapidly absorbed into productive employment.¹ There remained those who were too young or too old for work, or who were unemployed through sickness or some temporary dislocation of the industrial machinery. For their benefit he proposed that, under the control of the new Union authorities, “the rudimentary charities of a civilised community”² should be legalised and given the strength and efficiency of large-scale organisation. In view of the later lapse into the horrors of the General Mixed Workhouse, it should be emphasised that he recommended not a single penal establishment, but a series of specialised institutions, in which the various classes of paupers—the old and impotent, the children, the able-bodied females, and the able-bodied males—might be separated for differential treatment.

Nor would he have stopped there. Great, half-formed plans, for Government action to an extent never before contemplated by practical statesmen, flitted through his mind as he worked over the evidence. Repression alone could not solve the problem. Preventive measures were necessary—a system of elementary education for working-class children, and sanitary regulations to relieve the burden of excessive sickness and premature widowhood and orphanage. Chadwick asked for more time to consider these measures; but Lord Melbourne (under the impression, Chadwick observed, that a few weeks were sufficient to work out the principles of a revolution in the largest branch of public administration) kept sending word that he could not understand why the report was being delayed. Between the impatience of the politicians and the contentiousness of the Commissioners, Chadwick’s scheme was

¹ Chadwick, who met Malthus at the Political Economy Club, asserts that he had begun to modify his opinions on over-population before he died (E. C. to Macvey Napier, 15 June 1836; Macvey Napier Papers, B.M. Add. MSS. 34,617, f. 458). There is a quite incorrect impression that Chadwick was a disciple of Malthus; Dr. Gilbert Slater, for example, describes him as “eager for the Malthusian principles of the Royal Commission” (*A Century of Municipal Progress* (1935), p. 339). Chadwick, in fact, lost no opportunity to combat Malthusian doctrine, both in Poor Law and sanitary questions.

² “Notes on the retirement of Mr. Nicholls from the Poor Law Board,” MS., n.d.

bungled. Only parts of his ambitious project found their way into the report and were later passed into law.¹ Unaccompanied by the supplementary preventive measures, the new law took on harsher, more unsympathetic lineaments than he had intended; the omissions, he believed, were a major cause of the irritation which the Act of 1834 aroused, and much of his energy in the following years was devoted to the attempt to supply them.

One fact consoled him. The regulating machinery he had devised was to be erected and set in motion. The Union would be a more effective and economical unit of administration than the parish; though he had misgivings about entrusting it to a committee of amateurs, “annual, unskilled and practically irresponsible,”² instead of the paid experts he had originally suggested. More promising still was the central department, from which a vigorous and well-informed Commissioner—and who more vigorous than the man who had dominated the Poor Law inquiry, or better informed than the principal architect of the new system?—could plan to push forward the frontiers of beneficent State control. Confidently Chadwick awaited his reward from a grateful Government.

A Commissionership at £2,000 a year, however, could not well be bestowed on one who had no social standing and no claims to distinction save his knowledge and ability.³ Thus, despite Senior’s recommendation that his name should be the first to be considered for one of the three vacancies, it was as a secretary and a subordinate that Chadwick went to Somerset House. He saw the danger at once. Already, with those inflexible notions of his, he had crossed swords with various members of the Commission of Inquiry. In a secretary such contrariness would be unseemly. Senior assured his incensed friend, however, that he would be looked upon rather as a confidential adviser than as a mere clerk with no right or opportunity of expressing an opinion, “rather as a

¹ In the Report the abuses of the old system were described by Nassau Senior, while to Chadwick was assigned the exposition of the remedial measures, with the important exceptions of the sections dealing with Bastardy, Settlement, and Emigration, which were drafted by his collaborator (E. C. to Edward Gulson, July 1837).

² E. C. to S. G. Osborne, 22 August 1844.

³ “I must speak frankly, your Station in Society was not such as would have made it fit that you should be appointed one of the Commissioners” (Lord Spencer (Althorp) to E. C., 8 May 1841).

fourth Commissioner than as a Secretary."¹ Fortified by this assurance, Chadwick took up his position with a very superior view of the scope of his duties.

It is understandable that he should eye the three Commissioners with a natural resentment, which deepened when he assessed their characters and their fitness for the work in hand. J. G. Shaw-Lefevre was certainly, he thought, "a gentlemanly person of engaging manners;"² "but about as fit to act for the poor law as a delicate girl would be to assist in performing an operation."³ Member of a Whig family, Senior Wrangler and Fellow of Trinity, a brilliant linguist with first-hand knowledge of Europe, Shaw-Lefevre had enjoyed all the advantages of birth, education and patronage that had been denied to Chadwick. He got on well with the Secretary, as he got on well with everybody else; but Chadwick mistrusted amiability which too easily softened into compliance, and in his eyes social qualities did not make up for lack of special knowledge, and the stiffening that came from the conviction that one was holding firm to right principles. George Nicholls, the manager of a Birmingham bank and a former East India captain, he regarded with more respect. Nicholls had reformed his own parish of Southwell on principles which foreshadowed those laid down in the Poor Law Report, but his experience was limited to the parish and parochial machinery. Earnest and humourless (attending a performance of *Don Giovanni* on one occasion, he was heard to murmur "What a shocking state of society!"⁴) he had a profound and narrow faith in the benefits of the workhouse test.

With Shaw-Lefevre and Nicholls Chadwick remained on good terms, despite their differences. The guiding spirit of the Commission, however, was a voluble, positive Welshman, Thomas Frankland Lewis, for twenty-two years a Tory M.P., with some experience in minor ministerial appointments, who entered Somerset House "with an express warning from Lord Melbourne against theory and speculation."⁵ In him Chadwick saw personified the do-nothing traditions of the old Government service.

¹ Nassau Senior to E. C., 5 February 1837.

² E. C. to Lord Liverpool, 14 October 1841. ³ MS. fragment, n.d.

⁴ Memoir of George Nicholls by H. G. Willink, prefixed to Nicholls' *History of the English Poor Law* (1898 edition), vol. i, p. lxxii.

⁵ E. C. to J. H. Burton, 3 June 1844.

How could he carry out the new ideas, demanded Chadwick, this man who was a disciple of Ricardo and Malthus, and who had drafted the report of Sturges Bourne's Committee, which proclaimed him a disbeliever in "compulsory contribution for the indigent"? They hated and distrusted each other on sight. Chadwick, with good reason, thought it futile to expect the introduction of comprehensive institutional provision for the paupers, or any other aggressive action planned to deal with the wider problems of destitution, from one who felt in his heart that these were matters with which Government should not meddle. Lewis, for his part, at once showed that he intended to give no elevated status to this dangerous, unpractical visionary. There would be no unofficial Fourth Commissioners while Frankland Lewis ruled at Somerset House. When Chadwick expressed an opinion at the Board, it was received frigidly as though a clerk had broken in on the discussion. At one of the earliest meetings Lewis requested him to withdraw while the Commissioners deliberated. As he left, Chadwick protested that by the terms of the Act, the Commissioners were bound to keep a record of their proceedings, and the proper recording officer was their Secretary.¹ For a subordinate it sounded an arrogant claim; but it was the only ground on which Chadwick could assert a right to be present while the Commissioners discussed and framed their policies; and he had no intention of surrendering into the inactive hands of Frankland Lewis the administrative weapon which he had forged, and with which he had planned to assail so many social evils. From this time onward there poured in to the Government a steady stream of protests and remonstrances from the disaffected Secretary, complaints of the way in which his chiefs were executing the law, and claims for promotion in recognition of his superior merit and grasp of the subject.

Meanwhile, for good or ill, the new Poor Law was now connected indissolubly in the public mind with the name of Edwin Chadwick. As he complained bitterly to Lord Spencer, while all the Ministers seemed unaware of his services, the agitators against the measure identified the Commission with himself.² The favourite phrase of the editor of the *Northern Liberator*, he

¹ E. C. to Lord Spencer, 8 May 1841.

² E. C. to Lord Spencer, 25 April 1838.

heard, was that Chadwick ought to be forthwith gibbeted, while in some parts of Yorkshire the mob swore never to be "Chadwicked," as they termed being married under the new Registration Act.¹ It became the most hated name in England as the odium of the Poor Law Bastilles increased. On the other hand, amongst those whose duty it was to enforce the Act in the localities, it was widely believed that "the Secretary was everything and the Commissioners mere cyphers." Much of the correspondence was addressed to him personally as if his superiors did not exist. When deputations of Guardians waited on the Board, they would ignore the Commissioners and address their remarks to Chadwick, a situation so embarrassing that eventually he ceased to attend when deputations were present. Sometimes, after seeing the Commissioners, they refused to leave until they had stated their case to Chadwick; as they did not always inform him that they had seen the Commissioners first, they occasionally got contradictory advice. Such incidents did nothing to lessen the tension between Chadwick and the Commissioners. They imputed to him a spirit of insubordination, an overbearing ambition, and a rigidity of outlook that no experience could soften; while, for his part, Chadwick saw in every departure from the line he had marked out in the Poor Law Report jealousy of himself and a determination to cripple the measure which was his creation. Hence, as Chadwick describes, to circumvent their watchful animosity he was compelled to disguise the suggestions which he thought it necessary to make. His method was to coach the Assistant Commissioners, and put them forward to voice his ideas. "On one occasion when I had given some suggestions as to regulations to a young Assistant Commissioner on a subject referred to him, and when he brought them forward and read them at the Board, there was a brightening of countenances, and strong and immediate praise to him for the ability of the suggestion. When he unwittingly and ingenuously declared that the praise was not due to him but to the Secretary sitting at the bottom of the table, there was such a change in the expression of the countenances to sour blank, and the scene was so ludicrous that I could scarcely refrain from laughing outright."²

¹ E. C. to Russell, 1 February 1838; to Lord Spencer, 25 April 1838.

² "Notes of personal paper," MS., n.d., probably 1847.

Meanwhile, Chadwick found it hard to credit that so excellent a law was as unpopular as *The Times* and the agitators made out. How could the charge of harshness be maintained? Were not wages highest and the condition of the workers most improved where the measure had been most fully carried out, and depression greatest and discontent most widespread where the rates were heaviest and least had been done to abolish the old practices? Complete satisfaction with the Act and—only thinly veiled—with himself as the author of it runs through Chadwick's survey in the *Edinburgh Review* for July 1836 of the first eighteen months' working of the Poor Law Commission.¹ In the southern districts paupers had been thrown off the rates in droves, and the "surplus" labour had been absorbed as he had predicted; in twenty-two counties, comprising 187 Unions, the expenditure on relief had fallen by 43½ per cent. In the winter of 1836, however, the Commissioners turned their attention to the industrial districts, and Chadwick's complacency was blown upon by a bleak wind of failure and hostility from the north. Bad harvests, severe winters, influenza, extensive unemployment in the textile industry, the resistance of the working classes, all combined to rout the Poor Law Commissioners. It had been a serious error in tactics, he believed, to deal with the southern counties first; the new system should have been introduced into the northern towns in the first year, while trade was still good and the agitators were otherwise engaged. But not the slightest doubt entered his mind that if the workhouse test had been introduced before depression hit the industrial workers, and if it had been administered with rigid honesty and efficiency, it would have taken the strain of any burden likely to be cast upon it, and would have withstood even the impact of widespread and prolonged unemployment.

Thus it was to the administrative weaknesses of the Commission and the local authorities that Chadwick pointed in explanation of the swelling figures for poor relief. Worst blunder of all had been to appoint Commissioners who were half-hearted at best in their adherence to the principles of the Act, and who shaped their policy with a fearful eye on *The Times* and the agitators. Frankland Lewis had now retired, but his spirit continued to rule in Somerset House, for he was succeeded by his son,

¹ *Edinburgh Review*, July 1836, vol. lxiii, pp. 487-537.

George Cornwall Lewis, who inherited his father's feud. As strong-willed as his father, George Lewis possessed considerably more ability. He was, says Bagehot, "too prosaic, too anxiously safe, too suspicious of everything showy";¹ but on these qualities he had built up a reputation with the Whigs as a practical man of business with aims and motives which any other practical man of business could readily comprehend. Unemotional himself, and distrustful of feeling in others, he could not understand Chadwick's fierce enthusiasms; and he turned a cold eye on Chadwick's theories of Government action. "The relation between himself and the secretary," remarked a writer in the *Westminster Review*, who was clearly indebted to Chadwick for his information, "was that of an ill-assorted marriage of a Catholic husband and a Protestant wife; the wife somewhat the cleverer of the two, but with no privilege beyond the use of her tongue."²

So for a dozen years the conflict of wills went on at Somerset House. Chadwick was unsafe and unpractical, the Lewises told their Whig friends, he wanted to go too fast, and his proposals were inhuman in their severity. The Commissioners were pusillanimous, retorted Chadwick, they countenanced practices which were flatly opposed to the principles of 1834, they employed office methods which were arbitrary and inefficient and, in fact, illegal. Over the question of outdoor relief to the able-bodied Chadwick fought innumerable skirmishes and four major battles. The last and greatest battle he fought and lost in 1841; and as a result of it even his infrequent attendances at the meetings of his chiefs came to an abrupt end. He thought seriously for a time of accepting an offer from Lord Normanby to place him in some other Government department—as counsel to the Home Office he could supervise the execution of two other measures he had fathered, the Factory Act and the County Constabulary Act. Since 1839, however, he had been engaged on the sanitary inquiry, and he was beginning to realise that it was the biggest and most important of his career. He stayed to see it through.

It is fortunate for Chadwick that his reputation does not rest entirely upon this chapter of his career. Had he been in command

¹ W. Bagehot, *Biographical Studies* (1881), p. 207.

² "Patronage of Commissions," *Westminster Review*, October 1846, vol. xvi, p. 229; probably by W. E. Hickson.

at Somerset House from 1836 to 1841, that unquestioning confidence of his in the possibility, even the expediency, of cutting off all forms of outdoor relief to the able-bodied might well have brought the whole Poor Law edifice crashing about his ears. The "supineness" of the Commissioners at least averted that danger. One unexamined theoretical assumption and one large practical miscalculation had between them made nonsense of Chadwick's Poor Law scheme. The assumption was Chadwick's excessive faith in the elasticity of the economic system, and in its capacity to absorb the impact not merely of casual day-to-day unemployment, but even of the hard-core unemployment which emerges when an industry goes into decline, and the recurrent mass unemployment which is due to fluctuations in trade and is the heaviest burden of all. Believing that the demand for labour might shift but did not fall away in total sum, he seriously over-estimated the facility with which a labourer thrown out of work in one trade could find alternative occupation in another. The rest followed logically. If there are jobs for all, then the able-bodied man who is without one for any length of time must be either unwilling to work or of such a character that no employer would engage him. In short, he was likely to be a bad lot: an idler, a wastrel, a trickster, an inefficient worker, or a black-listed Trade Unionist. To submit him to the discipline and frugal diet of the workhouse was as much in his own interests as in those of the community at large. Only by those reformatory influences could his moral fibre be sufficiently strengthened to support the strain of independent existence; only so could the honest labourer be spared the demoralising spectacle of a man who had not worked enjoying every day of the week the luxuries of meat, white bread, and strong ale.

For one whose boast it was that his proposals were based unshakably on the facts, Chadwick showed a peculiar insensitivity to the evidence when he visited the handloom weavers of Bolton and Macclesfield in 1840; and for one who claimed to trace back pauperism to its roots, he remained singularly incurious about the extent and nature of the various types of unemployment. While his theory was thus insecurely erected on an assumption as uncritical as any made by the "hypothesisists" he so despised, his practical recommendations were also vitiated from the start by a fundamental miscalculation—that, having read his reports, the

Government would be stimulated with something of his vision and his enthusiasm for large administrative schemes. Where were the teachers, the nurses, the asylum attendants, and all the other specialists demanded by the policy of "aggregate in order to segregate"? To find and train them, and to establish and equip the various residential institutions for instructing the young, tending the old, and curing the sick, made a call upon the resources and the active goodwill of the Government for which there was no precedent. Neither the Poor Law Commissioners nor the Whig Ministers had any heart for so ambitious a programme. They chose instead to do as little as they dared, and that as cheaply as they could. On the grounds of economy and simplicity, they created a hermaphrodite administrative monster, uniting in a single body one institution whose purpose was deterrence, with another institution, or series of institutions, whose professed objects were treatment and instruction. In so doing they made it impossible to divide the "involuntary" sheep from the "voluntary" goats; all alike, the aged and infirm, the orphans, the widows, the vagrants, the able-bodied unemployed, bore the same stigma and were subjected to the same discipline.

To do justice to Chadwick, therefore, it is essential to realise that his dispute with the Commissioners over their policy of indulgence—a dispute in which his errors of judgment and obtuseness of feeling reveal him in the worst possible light—was only one aspect of a wider conflict of principle. The Webbs have made it their major criticism of the Poor Law Commissioners that they did not view pauperism in the context of destitution, and therefore neglected the causes which led to the perpetual recruitment of the pauper host.¹ This criticism, valid as it is against the Commissioners, cannot be levelled with anything like the same force against their Secretary. For, as we have seen, Chadwick in 1834 was already elaborating measures designed to cut at the roots of pauperism. He never believed, with Frankland Lewis, that pauperism was part of a divine or natural ordering of society, and that—as the Malthusian revelation ran—great numbers of mankind were doomed to live on the margins of misery, only relieved by the casual charity of their betters. To the faith in "God" or "Nature," which issued in a policy of administrative inertia

¹ *English Poor Law History*, Part II, vol. i, pp. 160-1.

(Melbourne's "letting things shake right") and a complacent acceptance of things as they are, he opposed a faith in Government as a contrivance of the human will, which might be used aggressively to minimise the volume of pain and maximise the volume of pleasure. Limited as he was in the range of his intelligence and sympathies, and inept as he showed himself in the calculation of political expediencies, he stands out as one of the very few men in the State departments of his time who held firmly to the belief that it was the essential business of Government to take thought for the welfare of the people—and, having thought, to act.

As he told Sir George Grey in 1847, he had from the first urged the segregation for specialised institutional treatment of the various classes of paupers, the sick, the blind, the idiots, the lunatics. But these were "collections of sores" which treatment could only alleviate; and "the contemplation of these wrecks of humanity continually forced upon me the consideration whether nothing effectual could be wrought for prevention. At every opportunity, I have made exertions to explore the various contributory sources or causes of Pauperism and the practicable means of prevention. . . . It was frequently only necessary to go a few links or a few steps back beyond the range of popular discussion and legislation, when we are brought upon causes which upon due investigation are found to be preventible and generally with large pecuniary economy." With the most notable of these inquiries, the sanitary investigation, this study deals at length. But there were others, some fruitful, some—through lack of time, shortage of money, and the scepticism of the Commissioners—abortive. He devised a scheme of industrial schools intended to train pauper children for productive employment. He conducted, to give a further example, a private investigation into the causes of the appalling number of deaths and injuries among the labourers engaged in constructing the new railway system with which England was equipping herself in the 1840's; and, since George Lewis could not be persuaded that this fell within the scope of the Poor Law Department, he printed and circulated at his own expense a report containing his recommendations.

For six more years after his revolt in 1841 Chadwick remained at Somerset House in this anomalous position, not strong enough to overthrow the Commissioners, too powerful to be dismissed by

them. The bulk of the Poor Law work had passed from his hands into those of the Assistant Secretary, George Cooce. "Your differences with Mr. Lewis were so notorious in the office," commented E. C. Tufnell, one of the Assistant Commissioners, "that I remember once mentioning to Mr. Cooce that I wondered why you were not dismissed or could stay at your post. His reply was, that though you did next to nothing as Poor Law Secretary, you were so useful to the Government in conducting the Sanitary inquiry and other matters, that you fully earned your salary, and were one of the hardest worked public servants that he ever knew."¹ Thus, one good result emerged from that unhappy tangle of crossed wills—he was left very much to himself to work out the principles of his preventive administration. It was fortunate indeed for the public health movement that Chadwick did not make his escape in the summer of 1841.

¹ E. C. Tufnell to E. C., 1847.

CHAPTER II

THE "SANITARY IDEA"

CANNING once observed that there was nothing he so much dreaded as facts and figures; repeating this to Lord Brougham, Chadwick added that in truth there was nothing which ought to have been dreaded more than such figures as were then available—"wretchedly imperfect figures, giving only half facts, leading to wrong or wild conclusions."¹ At the turn of the century there had been keen debate whether the population of England was increasing or decreasing, and elaborate theories about the future of society had been spun with vast ingenuity from the few known facts. Error and bias were inevitable where judgment and not measurement was the guide. Fear of Roman Catholics was enhanced because their exact strength was unknown; jealousy of cheap Irish labour could grow because its proportions were not clearly seen; and—to quote one of Chadwick's examples—the pessimistic school of social moralists were encouraged in their gloom by Patrick Colquhoun's fantastic estimate that there were 50,000 prostitutes in the capital, which meant one for every three or four males in the London of his day.² Political arithmetic was making a slow progress, however, trimming the outlines of fluffy generalisations, replacing crude guesswork by verifiable information, defining the lineaments of society every year in sharper outline. Finlaison had taken the first English census in 1801 (fifty years before, Parliament had rejected an idea which infringed the liberty of the subject and was likely to bring about a plague or

¹ E. C. to Lord Brougham, 28 February 1856.

² *Constabulary Report*, p. 15 (*P.P.* 1839, vol. xix, p. 1). Even in 1844 Southwood Smith could write to Chadwick (19 January 1844): "It is notorious that during the last year fever has been ravaging many localities in the provinces and in the large towns, but no one can form any conjecture as to the real extent of the evil, though this is a matter which the public and the legislature have a deep interest in knowing."

other public disaster); actuaries, worried about the validity of their life tables on which the solvency of the insurance companies depended, had begun to work out the theory of vital statistics; in 1832 the Board of Trade had set up a Statistical Department, introducing an outside expert, G. R. Porter, to superintend it; in 1833 the Statistical Section of the British Association had been established, to be followed promptly by the foundation of Statistical Societies in London, Manchester, and Bristol. More and more the appeal to facts and figures strengthened the hand of the reformers. John Howard, touring the gaols in 1774, had been the first to use the statistical method as an instrument to diagnose the character and assess the gravity of social disease. John Rickman's census of 1831, showing the population and wealth of the manufacturing districts, had its influence on the Reform Bill debates.¹

In this development, which before the century was out was to make the central departments vast factories for the production of blue-books, Chadwick played a decisive part. He possessed no mathematical ability, and the subtleties of statistical analysis were beyond him,² but he realised that the first step towards controlling social evils was to measure them. Finding his advance everywhere blocked by entrenched interests, he soon perceived the blasting power of fact. His first work of note, the essay on "Life Assurances" in the *Westminster Review* (1828), was an exposure of the misleading picture of social conditions presented by the out-of-date life tables of the insurance companies, and a plea for Government action to institute a complete registration of births, marriages, and deaths, the "first stages of the process of forming a legitimate theory" being "diligent investigation and the sagacious comparison of a variety of phenomena."³

Eight years later the Whig Government introduced a Registration Bill, intended primarily as a measure for the relief of Non-conformists from that remnant of Anglican privilege, the Church registration of births, marriages, and deaths. Chadwick seized upon the Government's little measure, which lacked any scientific attributes, either medical or economic, and gave it a new power

¹ J. Rickman to E. C., 5 June 1840.

² See Sir A. Newsholme, *Elements of Vital Statistics* (1889), p. 112, for examples of his statistical blunders.

³ *Westminster Review*, February 1828, vol. ix, p. 417.

and a new direction. He obtained the provision that when a death was registered its cause should also be indicated, so ensuring that the record should furnish not merely the roll-call of the dead, but the diagnosis by which the communal efforts of preventive medicine might be directed.¹

In the debate Lord Ellenborough carried a suggestion that the measure should be put into effect by the new Poor Law Unions, on the grounds, as he later explained to Chadwick, that the Government's first proposal would have distributed throughout the country "a strong Battalion of Whig Attornies to act as Party Agents at the Public Expense."² There was "great wailing about the lost Battalion,"³ and the wailers looked on Chadwick as the cause of their bereavement. He always believed that Lord Melbourne's bearing towards himself became less cordial after this incident. But Ellenborough's proposal was, in fact, made without consulting Chadwick.⁴ Once it was put forward, Chadwick's one concern was to insulate the Poor Law Guardians against the jobbery and intrigue which the creation of new offices always bred; and at his suggestion the appointment of the local registrars was made subject to the approval of the Registrar-General. Nor did the measure increase his popularity with the Church. The poor curate, with his £70 or £100 a year, looked eagerly for the "godsend" of the smallest fees; moreover, the clergyman who recorded the marriages of the middle classes was frequently invited to the wedding dinner afterwards, and "to a poor clergyman a feast is something."⁵ But it was their baptismal fees which were hit most of all. "The labouring classes have a notion that if their children die without being properly named the proper Angels will not know by what names they may be called to heaven by. But if the child be named and registered by any public officer that will do as well; the child is named and that is enough: they don't see why they should go and pay the parson when they can get it done for nothing by going to the Registrar. The inferior clergy have preached various sorts of doctrine against this belief, but still their baptismal fees have diminished and they

¹ 6 & 7 Will. IV, c. 86.

² Lord Ellenborough to E. C., 27 October 1841.

³ Ibid.

⁴ The Webbs (*English Poor Law History*, Part II, vol. i, p. 118) echo the Whig rank and file in asserting that the idea was due to Chadwick.

⁵ E. C. to Lord ? (probably Russell), 8 January 1841.

preach vigorously against the Government from which it emanates."¹ It was a curious episode, and as a result of it Chadwick's reputation suffered on two counts, as an enemy of the Church for sponsoring the Bill, and an enemy of the Government for depriving them of some five hundred appointments.

The new department was established at a time when a large proportion of Government offices was directed to the outdoor relief of the upper classes, and granted by Ministers to those bearing the family name, or, perhaps, merely the family features. The first Registrar-General was T. H. Lister, who was distinguished as a three-decker novelist, but had the additional qualification of being Lord John Russell's brother-in-law. He was succeeded by a cavalry officer, the brother of Sir James Graham. "Neither gentleman understood anything of medical and sanitary statistics and never perhaps wrote a line of the reports on them."² But Chadwick succeeded in persuading Lister to appoint as his assistant a young doctor, William Farr, who, in the course of an unorthodox and unsystematic medical training, had picked up a knowledge of vital statistics; and Farr set to work, contentedly and profitably, to introduce order and method into the facts, and illuminate with their aid some of the darker problems of society.

There was no personal friendship between the two, and Chadwick, who at times was as imperious with figures as with men, inevitably came into conflict with the quiet clerk at the Register Office. Farr ventured to question in the *Lancet* some tables which Chadwick had drawn up to show that in those prisons where the diet was richest the amount of sickness was greatest, tables of which he was very proud, and which tended to demonstrate what was not as obvious as it might be to the queasy stomachs of the working classes—that the most economical feeding was also the most humanitarian. This piece of perverseness Chadwick overlooked. But next he found in the Registrar-General's returns a number of deaths from starvation. This implied that there were people who preferred to die quietly in the street rather than enter one of the Poor Law Bastilles. Chadwick therefore published an attack on Farr's figures, together with animadversions on his

¹ E. C. to Lord ? (probably Russell), 8 January 1841.

² E. C. to Duke of Northumberland, 27 December 1878.

integrity, in the *Official Circular*, and showed that only two or three per cent of the cases registered as deaths from privation were in fact deaths from lack of food, and those were either accidental or suicidal.¹ This coolness continued between the two men, so differently constituted and working by so different ways to the same end. He paid no attention to Farr's "animosities or petty jealousies," Chadwick told a friend in 1844, "but I am sorry to say that it is not the only instance in which on looking into some covert from whence an insidious attack on my labours has proceeded I have found some one behind to whom I have rendered some special service."²

The article on Life Assurances, which reveals Chadwick's early interest in statistics, shows also that at twenty-eight he had already formulated the theory which underlies his public health work, the broad but sufficient principle that the length and healthiness of life are determined by the circumstances in which it is lived. He quotes with approval the conclusion of Villermé, the French medical statistician, that "the gradations of wealth, or the means of providing comforts, may almost be taken as the scale of mortality," and urges that an investigation into the conditions of the working classes would be an "invaluable acquisition to science, and would direct the public exertions in removing those circumstances which shorten life, and in promoting those under which it is found to attain its greatest duration."³ A few years later, when he was preparing his report on London and Berkshire for the Royal Commission on the Poor Law, he observed how some unhealthy neighbourhoods were notorious as sources of pauperism. The beables of Newington, for example, being ordered one very severe winter to pay particular attention to the sick outdoor poor, had gone at once without the need of any inquiry to a certain group of courts—just as a gamekeeper might go to a well-stocked preserve—and had returned with two coach-loads of fever victims.⁴

This was the seed which was to bear so plentiful a crop in later years, but it did not germinate until 1838, when Chadwick, now

¹ E. C. to Dr. Laycock, 13 April 1844.

² Ibid.

³ *Westminster Review*, February 1828, vol. ix, pp. 413, 385.

⁴ *Extracts from the Information received by H.M.'s Commissioners, as to the Administration and Operation of the Poor Laws*, 1833, p. 310.

Secretary of the Poor Law Commission, was permitted to enter upon a course of inquiry which his superiors thought of little importance, save in one respect—that it kept him quiet. Throughout the intervening years he had sat in Somerset House, at the centre of the Poor Law web, receiving from day to day the reports of Guardians and relieving officers and workhouse surgeons with their constantly reiterated lesson that disease filled the workhouses and insanitary conditions bred disease. "For some reason, which . . . he never understood, the sanitary idea became dominant in his mind, and he became impressed with the conviction that if sanitation were carried out in its completeness, disease, which was the cause of all death before the appointed time, would itself die."¹

To the relieving officer at the parish pay table and the parish surgeon on his rounds in the lower districts of London the connection between the fever nests and the mounting poor rates was obvious enough. Reasoning that there could be no end to the outlay of money in relieving individual cases of fever until the cause which produced the malady was removed, the Union authorities in some places indicted the landlords for nuisance, defraying the expense of prosecution from the poor rates. In doing so they came into conflict with the auditors, under orders to strike out and disallow all charges not expressly authorised by statute. The disputants took their argument to Chadwick, who saw at once that it offered an opportunity to introduce into the practice of the Poor Law Commission some of the principles of preventive administration which he had tried unsuccessfully to insert into the Act of 1834.

In 1838 the steady annual stream of typhus cases swelled suddenly to flood proportions. Altogether 13,972 cases of fever, 1,281 of them fatal, were reported in London during the year, 9,228 being contributed by certain districts, and in particular Whitechapel, Bethnal Green, Lambeth, St. George the Martyr, Stepney, Holborn, and St. George in the East. Chadwick called the attention of the Commissioners to the preventable nature of a large proportion of the fever cases, and recommended a special investigation by three well-known medical observers, Drs.

¹ Obituary of Chadwick, *Lancet*, 12 July 1890 (the writer is reporting a conversation with Chadwick).

Arnott, Kay, and Southwood Smith. No better choice could have been made. Dr. Neil Arnott, a friend of Bentham and J. S. Mill, at whose house Chadwick had made his acquaintance, had written a celebrated work on physics, and was a recognised authority on the warming and ventilation of houses. Dr. Kay (later Kay-Shuttleworth) brought to the inquiry the experience of a dispensary physician in the Irish quarter of Manchester, which, as he says, burned into him the conviction that it was futile to look to charity and medical skill alone to deal with social evils.¹ With an appetite for work which rivalled that of Chadwick, he possessed also something of his self-confidence and restless energy; and, exerting the same heroic strength of will and purpose, a few years later, as Secretary to the Committee of Council on Education, he was to drive himself into a break-down grappling with difficulties not unlike those which surrounded Chadwick at Somerset House. It is well to remember that Chadwick was not the only permanent official of the time to engage in disputes about his status, to arouse hostility from powerful sections of public opinion, and to encounter the charge that he was making a department of State the instrument of his own views and ambitions. With the third member of the medical inquiry, Chadwick's career was to be more intimately linked. Southwood Smith, physician to the London Fever Hospital, was another Benthamite (Bentham had left him his body for dissection and he had pronounced an oration over the philosopher's corpse at the Webb Street School of Anatomy); and as the author of a standard *Treatise on Fever* was shortly to become the chief medical theorist of the sanitary reformers. The heart of the gentle doctor, however, was a great deal sounder than his epidemiological views, and the simplicity and integrity of his character won over for the cause many who were repelled by Chadwick's demoniac reputation. All who met him—including even the cantankerous Toulmin Smith—acknowledged his love of his fellow men, which warmed the sympathies more than Chadwick's hard dry passion for efficiency. There was need for both men in the public health movement, which must touch the conscience as well as persuade the reason if the Peels and Grahams were to be brought to act.

In May 1838 the three set off on an exploratory tour, Arnott

¹ F. Smith, *Life of Kay-Shuttleworth* (1923), p. 14.

and Kay to Wapping, Ratcliff Highway, and Stepney, Southwood Smith to Whitechapel and Bethnal Green. How far, they inquired, were the conditions in which the poor lived due to the habits of the poor themselves, how far were they "voluntary," to use the favourite word of the Poor Law theorists? Very little, the Union medical officers replied. True, the poor drank too much; they neglected vaccination; they were reluctant to enter a hospital when they were attacked by contagious disease; they did not wash their persons, their clothes, or their houses often enough; they crowded noisomely together in dwelling-houses and lodging-houses. But it was not by these "personal habits" of the poor, as the investigators termed them, that their lives were most powerfully moulded. They were surrounded by filth, accumulated in cesspools and privies and stagnant surface drains; they breathed the exhalations of undrained marsh land, graveyards, and slaughter-houses; they had no choice but to live in narrow alleys and close courts. The investigators concluded that there were some evils which could not be avoided by any exercise of prudence on the part of the poor, and which were independent of their personal habits. They were removable, however, by the intelligent arrangements of public authorities: by a system of sewers, a plentiful water supply, an effective service of scavengers, by control of building, and regulations against overcrowding and noxious trades. Powers should, therefore, be given to Poor Law Guardians to cleanse ditches and pools, to inspect lodging-houses, to indict nuisances, and to carry out generally the functions of a public health authority—functions for which, as a locally elected body, charged with duties relating to the poor, and commanding the services of paid officers, they were particularly fitted.

It was not the first time that medical men had investigated the sanitary condition of the towns—Currie at Liverpool, Ferriar at Manchester, Haygarth at Chester, had done valuable pioneer work in this direction at the end of the eighteenth century—but it was the first time that a Government department had directed such an inquiry with a view to action. The reports were forwarded to the Home Secretary, Lord John Russell, on 14 May 1838, under cover of an official letter from the Commissioners, recommending as a temporary measure that the Guardians should be

empowered to indict the parties responsible for nuisances.¹ Thus, within four years of its establishment the new Poor Law Commission was expanding in a way which threatened to burst its statutory limits. The underlying theory of the Act of 1834, that most pauperism was "voluntary," the result of moral defects such as idleness, intemperance, and improvidence, was breaking down before the logic of the facts; and if the diagnosis was incorrect, it followed that the course of remedy must be altered. A case might be made out for invoking pains and penalties to scourge "voluntary" paupers out of their fecklessness; but once let it appear that the main causes of pauperism were not personal but social, that the pauper was usually the end-product of social processes over which he had no more control than he had over the weather, then a punitive treatment of paupers was no more just and sensible than a punitive treatment of lunatics, whom an earlier age had considered in some way responsible for their condition. Deterrence and alleviation, the remedies of 1834, must give way to an inquiry into causes, and the elaboration of wide schemes of reform aimed at prevention. Under Chadwick's influence a department founded to regulate relief to the poor was assuming, reluctantly, functions which reached out to embrace the duties and interests of all classes. It had already given birth to a Registration Act, under which for the first time the facts of national ill-health and premature mortality were being assembled. It was presently² to offer to vaccinate at the public expense the children, not of paupers only, but of anyone who cared to bring them to the Union surgeon. If Chadwick had his way it would also become a department of education and a department of public health, unless the Government should segregate these functions before they swamped the Poor Law Commissioners.

The letter to Russell produced no immediate effect. In their next report the Commissioners underlined its argument by publishing a description by Southwood Smith of the fever epidemic in the metropolitan Unions.³ The Hill Coolies that year received from the Whigs attention and abundant sympathy, Chadwick observed drily, but nothing was done for the helpless

¹ *Fourth Annual Report*, 1838, pp. 93-151.

² By the Vaccination Acts, 3 & 4 Vict., c. 29; 4 & 5 Vict., c. 32.

³ *Fifth Annual Report*, 1839, pp. 160-71.

population of the great towns.¹ Eventually, in August 1839, the Bishop of London, who coupled the experience of a London parish priest to his episcopal authority and influence, addressed the Lords on the text of Southwood Smith's report, and moved that an inquiry be made into the sanitary conditions of the labouring classes. No money was voted, no arrangements made to facilitate the investigation; a curt note communicated the resolution of the House to the Poor Law Commissioners.² As Chadwick commented, "the inquiry seems to have been barely tolerated."³

The investigation thus begun in 1839 was not completed until 1842. Shortage of money, the indifference of Chadwick's superiors, a change of Government, but most of all the intrinsic complexity of the subject, all combined to drag out the inquiry. "No money is allowed the Board for the compensation of professional men of eminence and only honorary service can be asked," he warned Dr. Hodgson, Peel's physician, requesting him to superintend an inquiry in Birmingham.⁴ Yet Parliament was considering a proposal to settle an annual allowance of £30,000 on the Queen's Consort! "The grant of £30,000 for the purposes of a general system of education by which several hundreds of thousands of children in various ways could derive benefit, was fiercely resisted," Chadwick wrote in disgust. "The grant of the same sum of money for the benefit of this one young man will be granted with adulations of virtues which he has yet had no opportunity of displaying."⁵ The deficiency of means Chadwick made up by his own untiring activity. A set of inquiries, based on the conclusions of the *Fever Report* of 1838, was directed to the Assistant Poor Law Commissioners and the Union medical officers in all parts of England, Wales, and Scotland.⁶ The replies to these questions were supplemented by material collected by Chadwick in personal interview or correspondence with surveyors, builders, prison governors, lawyers, police officials, with anyone whose position

¹ "Notes on Lord Normanby's speech," MS., 1844.

² "Memoranda of answers to the imputations of blame in respect to alleged delay to adopt sanitary measures," MS., 13 July 1844.

³ "Notes on Lord Normanby's speech," MS., 1844.

⁴ E. C. to Dr. Hodgson, 13 November 1839.

⁵ "Memoranda. For consideration in respect to the young Prince Albert's proposed allowance to be as considerable as that to the old Princes Royal," MS., n.d.

⁶ The terms of reference were widened to include Scotland in January 1840.

brought the facts beneath his constant observation. In addition, in obedience to his own canons of research by which the investigator was adjured not to rest content with the testimony of others, however well informed and intelligent they might be, Chadwick himself made a number of excursions to the provinces.¹

The inquiry had been in progress eighteen months when a well-intentioned but impatient Member of Parliament, Robert Aglionby Slaney, obtained a Select Committee on the Health of Towns.² He "must be doing something in it," snorted Chadwick, who resented the trespass.³ Chadwick had already squeezed dry Slaney's principal witnesses, and he saw nothing in the recommendations but "off hand and easy generalities, which could be reduced to little practice."⁴ The Report of Slaney's Committee, however, though of no great value in itself, prodded the Government into a show of action. Casting about for popular measures as the Home Secretary of the weak and failing Whig Ministry, Lord Normanby suddenly seized upon the sanitary question, and in 1841 introduced three Bills, "for the improvement of certain boroughs," "for regulating buildings in large towns," and "for the better drainage of large towns and villages." Chadwick's annoyance at this step, though it was sharpened by affronted *amour propre*, is understandable. His own investigation was still in progress; the results of the local inquiries were still coming in; and his general report was as yet a series of massive fragments. The Home Secretary now imposed a ban on the continuance of the inquiry, and when Chadwick got a friend in the Lords to ask for the production of the local reports the request was refused point blank. "A manifest determination was evinced to give the labours in the Poor Law department the go by, on this subject. The government was determined to have the exclusive merit."⁵ However, Normanby's ill-constructed Bills, concocted, as Chadwick judged, by Home Office lawyers and palace architects, fell to pieces in Committee. The wreckage was bequeathed to the Tories, in whose hands it remained for three years more an impending threat to the progress of true reform. Chadwick, while

¹ See, for example, the description of his inspection, in the company of Neil Arnott, Sheriff Alison, and a police superintendent, of the district of Glasgow lying between Argyll Street and the river (*Sanitary Report*, p. 24).

² P.P. 1840, vol. xi, p. 277.

³ "Notes on Lord Normanby's speech," MS., 1844. ⁴ Ibid. ⁵ Ibid.

pursuing his own inquiries, fought simultaneously a running battle against the principles of these Bills, which embodied technical recommendations out of step with the best contemporary developments, and revealed a timid anxiety to avoid any large-scale administrative experiments.

The downfall of the Whigs in September 1841, when Lord Melbourne thankfully surrendered the government and the deficit to Sir Robert Peel, brought a double benefit to the public health movement. First, out of a robust belief in the virtues of the measures he had introduced, Lord Normanby discovered in opposition a fervent enthusiasm for sanitary reform, together with an immense indignation at Tory tardiness; and he later proved a valuable ally to Ashley and Southwood Smith in the Health of Towns Association. Secondly, Chadwick was given permission to finish his report, which he was firmly convinced would never have appeared if the Melbourne Government had retained office. Towards the end of 1841 he was instructed to complete it so that it might be put into circulation before the next meeting of Parliament.

Another six months elapsed, however, the 1842 session approached its close, and still the report had not appeared. The Commissioners concurred cautiously with Chadwick's draft, but urged him to prune some of the stronger passages. The report was originally printed with the Commissioners' names appended but George Lewis opposed its adoption on the ground that it was calculated to give offence to Commissioners of Sewers and similar authorities. Before it could appear Chadwick had to undertake to bear personally any odium it might arouse. "It contains a great deal of good matter," George Lewis remarked to George Grote, with an air of giving the devil his due, "and, on the whole, I prefer it to anything else he has written. We shall present it shortly as *his* report, without making ourselves responsible for it."¹

The elements of the problem which confronted Chadwick in 1842 are simple to grasp. In the years from 1740 to 1820 the age-

¹ G. C. Lewis to G. Grote, 13 March 1842 (*Letters of Sir George Cornwall Lewis*, ed. Sir G. F. Lewis (1870), p. 119).

long balance between birth rate and death rate, between human fecundity and the adversities and accidents of human environment, had been upset decisively by a steep fall in the death rate. Humanitarian activity, advances in empirical medical knowledge, a more abundant food supply, the rising level of urban wages, the work of Improvement Commissioners and joint stock companies, all these together had brought down the death rate of Londoners in 1811 to 26 per thousand—little more than half the estimated figure for 1750. But after 1820 there was no great fall in the death rate till the seventies; and the difference between a crude death rate of 23 per thousand in the middle decades of the century and one of 18 per thousand at its end is a rough measure of the toll of slum housing, inefficient sewerage, and impure water supplies in the raw industrial towns. Year by year the great towns continued to grow, partly by a natural increase, but even more by the influx of immigrant workers whom the expanding industries attracted across the St. George's Channel and from the rural areas of England and Wales, till by 1851 half the population was urban. To the administrative difficulties raised by this unprecedented growth and concentration of the population very little hard thinking had been directed by the departments of State before the publication of the *Sanitary Report*; and the engineers who had produced the railway locomotive and the steamship had neglected to apply the same technical skill to the complex problems of human aggregation. The building encyclopædias of the time could be searched in vain for the word "ventilation." Great modern mansions in Belgravia reeked with exhalations from defective house drains. Perhaps not one home in a whole street of middle-class residences possessed a bath.¹ When Lyon Playfair examined the condition of Buckingham Palace, he found it so bad that the Government did not dare to publish his report.² While the middle and upper classes lived in such splendid squalor, the lower classes seemed in danger of being engulfed and poisoned by their own excretions.

The localising of "zymotic" or infectious diseases in the narrow courts and alleys of the poor had been frequently noted by those eighteenth-century physicians whose broad sympathies or

¹ E. C. to F. O. Ward, 7 October 1849.

² *Memoirs and Correspondence of Lyon Playfair*, ed. W. Reid (1899), p. 94.

straitened means drove them to practise in the lower quarters of the towns. This observation—that outbreaks of fever were correlated with insanitary conditions—gave rise to the characteristic medical theory of the public health reformers. According to this “pythogenic” theory, disease was caused by an “unknown something in the atmosphere” acting upon the gases from animal and vegetable decomposition, given off, for example, by a midden, a stagnant sewer, an overcrowded churchyard, a slaughter-house or a tanner’s yard. Any of these, in combination with the epidemic influence, might produce, by a kind of spontaneous generation, an outbreak of typhus, or perhaps—since this promiscuity of filth brought forth an uncertain progeny—of typhoid or cholera. Certain corollaries followed from the theory. First, the transmission of disease by contagion was a fallacy, and quarantine therefore an archaic survival from less enlightened days; Southwood Smith showed his faith in this conclusion by taking his granddaughter with him when he walked the fever wards.¹ Secondly, impure air and the reek of filth, not the privations of poverty, formed the predisposing circumstances which favoured the spread of disease, the chief sufferers being not paupers but independent labourers, artisans, and small shopkeepers, who were not destitute of food and clothing. Nor was it usually the weak and sickly who fell victims, for a large proportion were in the prime of life, at the height of their productive powers, and with dependent families, who, on the death of their parents, must be cast upon the rates. The comfortable belief was thus discredited that the unfit and superfluous, the paupers and the weaklings, were beneficently cut off by nature; and if the political economist was wrong, so was the philanthropist, who thought that fever was caused by destitution, and could be combated by grants of money, fuel, and blankets.

That disease was traceable to specific infections had been demonstrated clearly enough during the eighteenth century, and the pythogenic theory could be sustained only by ignoring some very obstinate facts, to which Chadwick closed his eyes to the end of his life. At the time of the “Great Stink” of 1858, for example, when the stench of the polluted Thames closed the law courts, emptied the river steamers, and assumed the proportions of a

¹ C. L. Lewes, *Dr. Southwood Smith* (1899), p. 77.

national calamity second only to the Indian Mutiny, the sanitarians gloomily prophesied pestilence on an enormous scale; the death rate for the year was, in fact, below the average, and there was a notable diminution in the amount of fever, diarrhoea, and dysentery.¹ To counter a disease, however, it is not essential to know its causal agent. Leprosy, the “sweating sickness,” plague, typhus, cholera, and typhoid, were all uprooted from England before their generating bacteria were detected. They retreated because the environmental conditions which favoured their advance were vanishing, for, from the point of view of preventive action, the soil in which a disease flourishes is no less important than the seed from which it springs. For a movement which aimed at clearing up the dark corners of the towns it was the soundest of doctrine to teach that man could make himself secure from pestilence only by directing intelligence and determination to the removal of its localising conditions. Thus, radically wrong as the pythogenic theory proved to be, it was given plausibility by its demonstrable effectiveness in practice; and it may well serve as an instance of those “fruitful errors” which in the history of thought, as Vaihinger reminds us, have so frequently produced sound practice out of false theory.²

In the light of this medical doctrine Chadwick turned to the examination of the returns from the local Registrars which by the end of 1839 were pouring in from 553 districts, giving for the first time in history a reliable and comprehensive picture of the causes of national ill-health and mortality. In the first year, 1838, for which returns were made, he found that the deaths in England and Wales from zymotic diseases numbered 56,461. It was as if the whole county of Westmorland or Huntingdon “were entirely depopulated annually, and were only occupied again by the growth of a new and feeble population living under the fears of a similar visitation.”³ From typhus alone the yearly slaughter was double the casualties suffered by the allied armies at Waterloo. The “Fever Bill” footed every year by the nation, in the form of charges for medical attendance, for the support of widows and

¹ For a description of this historic stink see William Budd, *Typhoid Fever* (1874), pp. 141–2.

² H. Vaihinger, *The Philosophy of “As If,”* (2nd ed. 1935), pp. 45–6.

³ *Sanitary Report*, p. 3; *P.P.* 1842, vol. xxvi, p. 1 (House of Lords).

orphans, for labour lost by sickness, for the shortening of the average working life by premature mortality, was an immense and growing burden.

The lesson of Chadwick's report was that the great mass of this mortality and sickness was preventable. He demonstrated this by a simple but conclusive device, which came as near as practicable to experimental verification in a field where laboratory methods of control and observation were out of the question. He took the average age at death for various classes of the community, inhabiting different quarters of the towns, so revealing at a glance the disparities concealed beneath the general averages for the country.¹

<i>District</i>	<i>Gentry and professional classes</i>	<i>Tradesmen</i>	<i>Labourers</i>
Derby	49	38	21
Bolton	34	23	18
Leeds	44	27	19
Truro	40	33	28
Bethnal Green	45	26	16
Whitechapel	45	27	22
Strand Union	43	33	24
Kensington	44	29	26

The age at death of the individual was thus shown to bear a direct relation to his rank in society. Now the circumstances of the labouring classes differed in two main respects from those of the gentry; they enjoyed a smaller income, and they inhabited dirtier districts, dirtier streets, and dirtier houses. Which of these two factors, income or environment, was responsible for the different expectation of life of the two classes? It was proved—to Chadwick's satisfaction—that the labouring classes received on the average a real income sufficient to keep them well above the level of starvation;² the greater mortality from which they suffered must therefore be ascribed to the physical conditions amongst which

¹ *Sanitary Report*, pp. 154-61.

² See below, p. 65.

they lived, and he illustrated this conclusion by "Sanitary Maps" of Bethnal Green and Liverpool, which showed the black crosses of death crowding thickly in the foulest and most overcrowded districts. It followed that if those physical conditions could be improved, there would be a corresponding improvement in the statistics of sickness and death.

Fever, then, was not the result of destitution; on the contrary, destitution usually came on the heels of fever, and "the poor's rolls were the pedigrees of generations of families thus pauperised." Of the 112,000 orphans and 43,000 widows receiving poor relief in 1840, Chadwick estimated that 100,000 orphans and 27,000 widows had been reduced to dependence by the death of their breadwinner from some sort of zymotic disease, arising from causes which were known and removable.¹ These pauper orphans and widows were a legitimate concern of the Poor Law Commission. Chadwick, however, looking beyond the walls of the workhouse, went on to demonstrate that preventable disease had economic and moral effects upon society at large far more serious than the additional burden it cast upon the ratepayers. Economically it represented a heavy annual drain upon the country's most valuable capital, its strongest and most experienced workers. During the Napoleonic wars Bethnal Green and Spitalfields had raised a regiment of volunteers, but in 1840 the recruiting officers would find it difficult to get together a grenadier company from the same districts; yet the wealth of the nation was ultimately dependent upon the bodily strength of the British worker, so superior to that of the foreigner that English navvies had been imported to build Continental railways.

But the moral effects were the gravest of all. It was often alleged that the misery of the poor was chiefly the result of their own intemperate habits. They had few or no pleasures to wean them from intemperance, replied Chadwick, and gin offered the readiest release from the depressing conditions which hemmed them in.² "Seeing the apparent uncertainty of the morrow, the

¹ *Sanitary Report*, pp. 190-2.

² In 1834 he had urged the Select Committee on Intemperance (*P.P.* 1834, vol. viii, p. 315) to consider "whether sober habits might not be efficiently promoted indirectly by the formation of cricket grounds, of public walks; horticultural gardens in the neighbourhoods of the smaller provincial towns, and by the institution of zoological repositories in the neighbourhood of the larger

inhabitants really take no heed of it, and abandon themselves with the recklessness and avidity of common soldiers in a war to whatever gross enjoyment comes within their reach."¹ Cleanliness and decency were impossible for the family which occupied a single room in a house unprovided with water or a privy. Overcrowding led to bastardy and incest, and forced the children on to the streets as thieves, beggars, and prostitutes. The evidence was overwhelming "how strongly circumstances that are governable govern the habits of the population,"² how filth and overcrowding acted as "physical barriers to improvement" against which "moral agencies have but a remote chance of success."³

Besides crime and vice, there were other products of the slums which the statesman and the employer had good reason to fear. Zymotic disease, which doomed so many workers to premature death and thinned the ranks of the higher age-groups, left behind "a population that is young, inexperienced, ignorant, credulous, irritable, passionate, and dangerous, having a perpetual tendency to moral as well as physical deterioration."⁴ It was raw youths like this who were so easily deceived by "anarchical fallacies" and flocked in thousands to the Manchester torchlight meetings; and such "mere boys" formed the majority at Trade Union meetings, from which their more responsible elders, with sounder views on the relationship between capital and labour, tended to stay away in disgust. Thus, just as fever sometimes broke from its reservation in the poorer quarters and crept out to ravage the broad squares and streets of the West End, so the social diseases of Trade Unionism and Chartism might be born amidst the neglected inhabitants of the slums, and emerge to threaten the established order. Chadwick drew his respectable hearers to the edge of the pit, and bade them observe the monsters they were breeding beneath their feet.

This was the first great service of his Report—to dispel by the hard light of its revelations the darkness of ignorance which hid from bourgeois eyes the domestic condition of the workers. The

towns; and by the free admission of persons decently dressed to them on Sunday, after the morning service . . . an over-strict and Judaical observance of the Sabbath (being) equally prejudicial to true religion and temperance." (Q. 325.)

¹ *Sanitary Report*, p. 131. ² *Ibid.*, p. 44. ³ *Ibid.*, p. 134. ⁴ *Ibid.*, p. 203.

lanes and alleys of the poor, "Little Ireland," the wynds of Edinburgh and Glasgow, the rookeries of St. Giles's, Villiers Square, and Golden Square, were as remote from the experience and imagination of the great majority of the middle and upper classes as some Punjab village or South African kraal. After 1842, however, there could be no excuse for ignorance, though interest might still continue to find arguments for inaction. In the language of eyewitnesses Chadwick gave descriptions of removable causes of disease, to be found not only in the industrial cities, but even in the small country towns and villages, which the sentimental delighted to paint as the homes of rustic comfort and rude agricultural health. The most damning evidence came from the Medical Officers of the Poor Law Unions, almost the only members of the professional or middle classes whose duties brought them into close contact with the lower classes in their houses. Thus, the Medical Officer of the Liverpool Union reported: "In consequence of finding that not less than 63 cases of fever had occurred in one year in Union-court Banastre street (containing 12 houses), I visited the court in order to ascertain, if possible, their origin, and I found the whole court inundated with fluid filth which had oozed through the walls from two adjoining ash-pits or cesspools, and which had no means of escape in consequence of the court being below the level of the street, and having no drain. The court was owned by two different landlords, one of whom had offered to construct a drain provided the other would join him in the expense; but this offer having been refused, the court had remained for two or three years in the state in which I saw it; and I was informed by one of the inhabitants that the fever was constantly recurring there. The house nearest the ash-pit had been untenanted for nearly three years in consequence of the filthy matter oozing up through the floor, and the occupiers of the adjoining houses were unable to take their meals without previously closing the doors and windows. Another court in North-street, consisting of only four small houses I found in a somewhat similar condition, the air being contaminated by the emanations from two filthy ruinous privies, a large open ash-pit, and a stratum of semi-fluid abomination covering the whole surface of the court."¹

¹ *Sanitary Report*, p. 31.

It was true, as Ashley observed, that "one whiff of Cowyard, Blue Anchor, or Baker's Court, outweighs ten pages of letter-press";¹ but all that print could do to shock and shame was done by Chadwick in the most powerful assault upon the sensibility of the ruling classes that had ever been attempted. All pointed to the same general conclusions: that the health and comfort of civilised man, urban man, depended upon arrangements for bringing his water supply into the towns and taking his wastes out, and for ensuring to each individual his due share of light and air; that in nineteenth-century Britain those arrangements were grossly inadequate; and that their inadequacy must be ascribed not so much to lack of knowledge as to a failure to apply such knowledge as was readily available. It was not the intractability of brute physical facts which formed the main obstacle to the cleansing of the towns, but the plain human stupidities of indifference, self-satisfaction, lethargy, and stubborn habit; it was not that the problem was too difficult, but that the mental effort directed towards its solution was too puny.

In drainage, water supply, ventilation, in all the essentials of urban life, the existing practice was far below the existing science. Methods of drainage exhibited the crudest empiricism, an ignorance of elementary hydraulics, and a conservatism which was blind to the benefits of the simplest improvements. Street sewers were immense brick caverns, flat-bottomed and flat-sided, washed only by a feeble trickle of water. Built on the hypothesis that they would accumulate deposit, they were made of brick so that they might be the more readily opened; and at intervals of five or ten years the streets would be excavated and men would scoop up the deposit in pails, raise it by windlass to the road surface, and leave it there in noisome heaps to be collected by the scavenger's carts. House drains were also made of brick, and in construction were no better than extended cesspools, fitted rather to retain deposit than to carry it away; and it was usual to lay down for a single house a drain with capacity sufficient to remove the refuse of a thousand. Rarely in the design of sewers and house drains was there any recognition of the elementary principle of hydraulics which forms the basis for the modern system of water-carriage, that by concentrating the flow of water in a smooth

¹ E. Hodder, *Life and Work of the Seventh Earl of Shaftesbury* (1886), vol. i, p. 361.

circular channel its scouring power may be increased. Only in a few middle-class houses had the water-closet replaced the cesspool or the privy midden; and in London its introduction was obstructed by the Commissions of Sewers, who imposed an illegal fee on any householder who sought permission to drain his house into the public sewer. Moreover, there were profits to be made out of filth which would be threatened if it were removed by the expeditious water-closet. Vast dumps of ashes, night-soil, rotting vegetables, straw, dung, refuse of all kinds, in thousands of tons occupying hundreds of cubic yards, the sweepings of the streets, the offal of the slaughter-houses, and the contents of the public privies, were built up in the midst of densely populated districts as the stock-in-trade of dealers who retailed it to farmers by the cart- and the barge-load.¹ In London, however, no refuse, except coal ashes, cinders, and dust, which were used in the making of bricks, paid half the expense of cartage, and transport costs limited the use and deposit of the refuse within a radius of three miles beyond the line of the district post. The charge for emptying cesspools averaged £1, and in metropolitan parishes remote from the agricultural areas this expense, to people who were usually in debt at the end of each week, acted as a complete barrier to cleanliness. Thus, as the great towns expanded and their centres grew ever more distant from the country districts, as the numbers of their inhabitants increased and the volume of their wastes increased in proportion, the burden became too heavy for the small scavenging contractors, and the traditional methods of sewage disposal were breaking down. The result was the steady secretion of filth in basements and backyards.

In street paving and the arrangements for surface cleansing, Chadwick found the same waste and the same want of science. A road-sweeping machine had been invented (by Whitworth), but the parish authorities clung to the old methods of hand-labour which provided employment for their paupers. When paving was laid down, the primary object was, not to facilitate cleanliness,

¹ The famous dunghill of Market Street, Greenock, described in the *Sanitary Report*, pp. 46-7, which the Webbs considered "the climax of horrors" (*Statutory Authorities*, p. 339), was rivalled in many other towns; cf. the "Ash Yard" of Gaywood, Norfolk, which was estimated to contain some 2,025 tons of refuse. (W. Lee, *Report to the General Board of Health on Gaywood*, April 1850, pp. 9-10).

but to expedite the flow of cart and carriage traffic, and it was therefore usually confined to the main streets. Of 687 streets inspected in Manchester, 248 were unpaved, 112 ill ventilated, and 352 contained stagnant pools and heaps of refuse and ordure. Yet the street cleansing of Manchester cost £5,000 a year; for which sum the first-class streets and the large thoroughfares were cleansed once a week, the second-class once a fortnight, and the third-class once a month—leaving untouched the courts and alleys where the poor lived, and where cleansing was required daily. Against any extension of the street cleansing services was raised the cry of immediate expense. In London an annual bill of £40,000 was incurred; but, as Chadwick pointed out, two-thirds of this was accounted for by the cost of cartage, which would become unnecessary if the sewers were properly adapted to carry away refuse. So far were local authorities from realising that the sewers offered the most rapid and economical means for the removal of refuse and mud from the road surface that in some towns the use of the sewers for this purpose was expressly forbidden under penalties in the local Improvement Act.

But the gravest deficiency of all, since it was the key to most sanitary improvements, was the shortage of water, not only for house cleaning and sewerage, but even for drinking, washing, and cooking. The water companies had got into the habit of intermittent supply at a time when their mains were made of hollowed elm-trunks, not strong enough to withstand the pressure of a constant supply. Though cast-iron mains were now in use, they still clung to their old practices, and, fearing the expense of new plant, were prepared to argue that a constant supply was technically impossible. In London the companies supplied their tenants on three days of each week for two or three hours at a time. With a show of generosity they had erected public fountains and stand-pipes in the streets and courts, where the poor might help themselves without charge, and around these, when the water was running, the inhabitants gathered to catch their supply in pails, fish-kettles, casks, cans, and even soup-plates. Yet, as Chadwick showed, every house could have a constant supply for twopence a week, so that the time of even the lowest paid labourer was wastefully employed in fetching and carrying water.¹ An efficient

¹ Even in middle-class districts the register of the cistern was watched with

sand-filter had been introduced by James Simpson, the engineer to the Chelsea Water Works, in 1829, but more than half the metropolitan supply still passed untreated from the river to the consumer. It was hardly surprising that during the cholera epidemic of 1831-2, the poor in some districts were convinced that the water had been poisoned to destroy them by a Malthusian-minded Government. In general, throughout the country, the well, the ditch, the river which served also as the main sewer of the town, were the sources from which urban populations drew their water; and few towns had yet had the enterprise to look further afield for more abundant and purer supplies, which the technical advances of the age had made it possible to pipe and pump to them from upland gathering-grounds.

Finally, Chadwick demonstrated how the immense expansion of the population had offered bounties to the shrewdness of the speculative builder and the "ignorance, cupidity, or negligence of landlords."¹ The census returns gave the impression that the number of houses had kept pace with the size of the population, but in actual fact every occupation under the same roof had been counted as a separate dwelling; and conditions in the growing towns were illustrated by Blackfriars parish, Glasgow, where in the years between 1831 and 1841 the population had increased by 40 per cent while the number of houses had remained the same.² The labouring classes, obliged to dwell within convenient distance of their places of work, must take whatever accommodation they could get. In the old districts of the towns they crowded, from cellar to garret, the decayed and superannuated mansions abandoned by the rich. In the new suburbs no scrap of land seemed too narrow, too damp, or too close to a public midden, to be free from the activities of the jerry-builder. Cellar dwellings, lacking drains or conveniences of any kind; back-to-back houses,

an anxious eye, and the household amenities expanded or narrowed from day to day with the fluctuations in supply. Cf. a letter to the *Times*, 14 July 1851: "Monday—water six inches. Cook and housemaid on short allowance. Master's bath relinquished. Tuesday—water one inch. Boiled vegetables and teas strictly forbidden. Wednesday—cistern dry; water nowhere. Thursday—the water on. Hurrah! Listen to that rushing sound. We shall drink—we shall wash—we shall bathe! Ah, in five minutes the stream ceases, and all our hopes are blighted."

¹ *Sanitary Report*, p. 7.

² *Ibid.*, p. 121.

without the sweetening draught of through ventilation; closed courts, with a stand-pipe at one end and a privy at the other—every obnoxious ingenuity in the economy of land and materials that the self-interest of landlords could devise, and the necessity of tenants could be obliged to accept, was to be found in London and the great provincial towns. No attempt had been made by the Government, apart from Lord Normanby's ill-considered Bills, to deal with these evils. Openings for light and air were actually penalised by the iniquitous Window Duties.¹ The chief concern of the legislature, as revealed in the Metropolitan Building Act, had been to prevent the spread of fires by requiring the construction of party walls of a minimum thickness; and no legal obstacle existed to bar the speculative builder from running up houses with walls one brick thick on undrained sites outside the jurisdiction of that Act. Viewing the chaos of London, sprawling outwards without plan and without control, Chadwick sighed for the "great design" of Sir Christopher Wren, the rejection of which, he believed, had cost each succeeding generation a death-rate too high by one-third. Christopher Wren and Edwin Chadwick between them would have made a good job of London.

As he thus surveyed the technical deficiencies in the planning and construction of essential public services, and the universal neglect of the lessons of science in solving the problems of the towns, it became obvious to Chadwick that he must become his own engineer. No one had yet taken the principles of hydraulics out of the text-books and applied them to town drainage, nor had any one yet thought of bringing together all the practical improvements in water supply and housing that the inventive genius of the period was now making readily available. Chadwick boldly annexed to himself this vast, little-explored region. There were, indeed, at the beginning few to contest his title. The Institute of Civil Engineers had been founded as long ago as 1818, but its members were still struggling to establish recognised standards of professional competence. Before the eyes of the ablest of the profession, the railway projectors dangled the richest

¹ By 4 & 5 Will. IV, c. 54, occupiers, if they were duly assessed to Window Tax in 1835, were permitted to open as many windows as they pleased. This step was rendered nugatory by the lawyers, who proved that nobody had been duly assessed to Window Tax in 1835!

prizes that their talents could command. The engineers of the water companies were wedded to the restrictive policies of their employers. In rural districts the highway surveyors were often no more than "ditch casters" or common labourers, while in the towns they were frequently unsuccessful builders or tradesmen, few of whom were capable even of drawing. The surveyors of the metropolitan Commissions of Sewers were little better; the extent of their acquirements was suggested when one Commission advertised for a surveyor able to use a spirit level.¹ Those "wretched empirics the modern engineers!"² It was Chadwick's continual lament that there were "marvellously few" trustworthy men amongst them; "a more ignorant, or a more jobbing set of men, less to be trusted, as the difference of their estimates and their expenditure will shew, than the common run of men who dub themselves with the title of engineer and pretend to science I have rarely met with."³ Nor were the architects any better, he told the students when he distributed the prizes at the Putney College for Civil Engineers; the proofs of their incompetence were displayed in "spectacle after spectacle of the ruins of fallen bridges, factories, and large buildings, in horrible deaths, and shocking mutilations occurring again and again from the like preventable causes."⁴ Altogether, "in no profession, perhaps, is there so large a proportion of bold, rapacious quackery as in the professions of civil engineering and architecture."⁵

Here and there, however, he found a shining exception, a man of practical common sense and an inventive turn of mind, who had experimented with ideas of his own. Such a man, for example, was the surveyor to the Holborn Sewers Commission, John Roe, "perhaps the only officer having the experience and qualifications of a civil engineer,"⁶ who since his appointment in 1820 had succeeded in introducing a number of improvements in the face of the conservatism and obtuseness of his employers. Roe had devised a system of flushing which halved the cost of cleansing the sewers; he had reduced the size of drains for short streets and

¹ *Sanitary Report*, p. 332. ² "Water Supply. Metropolitan," MS., n.d.

³ E. C. to John Shuttleworth, 9 October 1844.

⁴ *The Builder*, vol. cxxx, p. 362, 2 August 1845.

⁵ *Papers read before the Statistical Society of Manchester on . . . Labourers engaged in the Construction and Working of Railways*, 1846, p. 23.

⁶ *Sanitary Report*, p. 55.

courts from 4 ft. 6 in. x 2 ft. 6 in. to 15 in. in diameter; and, finding that the practice of joining sewers at angles (frequently even right angles) caused eddies and the deposit of sediment, and obstructed the current of water, he had persuaded the Commissioners to require that curves should be formed in the sewers with a radius of not less than twenty feet. Chadwick was delighted, and set Roe to work on a series of experiments to ascertain the most economical size of pipe for drains and sewers and the best materials for their construction. The "arterial-venous system" of town drainage, which he elaborated in the next two years, owed much to these suggestive experiments by John Roe. Despite the scepticism of engineers and Sewers Commissioners, Chadwick could not see why—if drains and sewers were formed of glazed earthenware instead of rough spongy brick, and a regular flow of water were concentrated in these smooth circular tubes—sewers of deposit should not cease to exist, and excreta be conveyed away from the household by the prompt and cleanly water-closet.

The two main objections to the use of the water-closet, apart from the cost of its installation, were that it must result in the pollution of the rivers, and that, at the same time and by the same process, it would permit valuable manure to run to waste. The key to the understanding of Chadwick's engineering schemes, which he sketched for the first time in the *Sanitary Report*, is his effort to show that neither of these results was inevitable. As he saw it, town and country stood in a reciprocal relation. Only too often the country, suffering from an excess of moisture and a shortage of manure, presented a gloomy picture of poor water-logged land, thin crops, a population few in numbers and afflicted by rheumatism, ague, and other illnesses produced by a damp environment. The companion picture could be seen in the neighbouring town, its inhabitants ravaged by the zymotic diseases caused by accumulated filth and a deficient water supply, its houses and streets foul with the matter needed by the starved land outside.¹ The solution was the "arterial-venous system", with the public sewers as the arteries pumping out the rich town guano, and the water pipes as the veins returning the excess moisture of the countryside to the place where it was most needed. A great annual revenue could be won by the simple expedient of

¹ *Sanitary Report*, p. 97.

removing the sources of ill-health from London's back-streets. If this income were vested in the public authorities, to whom, indeed, by law and custom it properly belonged, it would go far towards footing the bill for the other public services which were now so much neglected. The whole scheme was fascinating in its simplicity and economy.

If he must turn engineer to rescue the towns from filth, Chadwick found also that he must be equally inventive in his administrative proposals. No authorities existed whose functions had for their conscious object the maintenance and improvement of the public health. The Privy Council had been charged, under an Act of George I, to keep watch against the dangers of foreign pestilence, and an annual sum of £2,000 was voted for the National Vaccination Board. Beyond this the central Government acknowledged no responsibility for the health of the subject. Every man had a Common Law right to "air for his health, light for his profit, prospect for his pleasure," and the legal remedies of indictment might be invoked to suppress any nuisance which endangered the health or personal safety or conveniences of the citizen. "Annoyance juries," appointed by the Courts Leet, still perambulated some towns in search of public nuisances, an inquest of reluctant and ignorant tradesmen which retained its value only in the antiquarian affections of a Toulmin Smith. The public continued to suffer because no funds existed to defray the cost of prosecution by indictment, while large capital defended the most offensive nuisances.

Apart from the ancient and ineffectual remedies provided by the Common Law, the state of the public health was the unlooked for by-product of the activities of bodies with quite other aims in view; of Town Councils, for example, not yet quickened by a civic conscience and concerned mainly with the preservation of the archaic dignities and privileges of their members; of Commissions of Sewers, whose traditional function was defence against floods and surface waters, and whose works were ill-designed for the additional burden thrown upon them by the introduction of the water-closet; of paving trusts, more concerned to ensure a smooth flow of traffic than the cleanliness of the streets. Most of the early Local Acts, though providing for paving, lighting, cleansing, and watching, contained no powers for the drainage of

streets or houses, being framed not for sanitary purposes but for the defence of life and property and the improvement of communications. More recent Acts, containing drainage provisions, did not extend to courts which were not thoroughfares, these being looked upon as private property and so not entitled to benefit. Though Local Acts contained a multitude of clauses directed against nuisances and obstructions, these were often of little effect, since the most influential members of the Corporation or the Improvement Commission might well be the company directors whose gasworks contaminated the streams or whose chimney smoke darkened the atmosphere.

In the new suburbs of the growing towns, lying outside the jurisdiction of the Town Council or the Improvement Commissioners, frequently the only powers for drainage were afforded by the Highway Act.¹ These powers were permissive; they were clearly intended only to provide means for carrying off surface water which might obstruct the highway; and their enforcement depended upon the energy and public spirit of a body of unwilling householders, annually elected to form a Highway Board, and commanding the services of a single paid surveyor. Yet in many large towns the drains so formed were often the only available channels for conveying refuse from the household.

In the metropolis the natural drainage area was capriciously subdivided between the ancient Commissions of Sewers, each of which sat within its frontiers, jealously guarding its jurisdiction against the encroachments of the rest, and stubbornly resisting all attempts to saddle it with the sanitary burdens of a new age. When the Holborn and Finsbury Commission enlarged its sewers, the sewers of the City, which lay on a lower level and with which they communicated, proved insufficient to carry away their contents, with the result that houses on the river bank were inundated by sewer water after each fall of rain. Blind to the absurdity of draining a natural area by unconnected and partial schemes, the City Surveyor complained in an aggrieved tone that the waters of the "county" ran into the City jurisdiction, obliging the Common Council to widen its own sewers. The drainage of houses was not a function that the Commissions regarded as falling within the scope of their normal service. Any one who

¹ 5 & 6 Will. IV, c. 50.

applied to have a drain laid down from his house to the sewer was charged a guinea; this fee, which was quite illegal, was defended by one surveyor on the ground that "if they were not to resort to that measure, the sewers would be destroyed. Every one would make a hole in the sewer."¹ When the medical observers of the Poor Law Commission were conducting their investigation in 1838, the clerk to the Tower Hamlets Division told Dr. Arnott that he had heard few reports of fever in his district—yet Baker's Arms Alley, a notorious fever nest, was distant only the length of a short street from his office.²

While drainage, which offered no prospect of profit, was thus left as an inefficient public service in the fumbling hands of local authorities, water had become an article of trade, and in all but three or four towns was distributed by commercial companies. These had defects of their own. They directed their supplies exclusively to those houses which could pay water rates, and took no account of the important public objects of cleansing streets, flushing sewers, and fighting fires. Competition, the economists' recipe for cheap and efficient service, had given no defence to the inhabitants of the capital. The London water companies, with whom Chadwick was presently to be at open war, had soon perceived that it would be more to their profit if instead of cutting each other's throats they got together in a gentleman's agreement to cut the throats of their customers. There had been first a period of wild competition, when two or three sets of pipes were driven through the wealthier districts, and gangs of rival pipelayers fought in the streets. Then followed a reflective interval while the companies licked their wounds. And finally came a compact between the nine companies to partition London, and subject Londoners to a nine-headed monopoly.

One primary public service, water supply, therefore, had been abandoned to irresponsible and arbitrary private companies, who confined their activities within the estimated range of easy profit; two more, drainage and paving, were imperfectly executed by torpid, amateur authorities, who, in the acid words of Chadwick's famous indictment, "sit still amidst the pollution, with the resignation of Turkish fatalists, under the supposed destiny of the prevalent ignorance, sloth, and filth."³ In all three services, a new

¹ *Sanitary Report*, p. 311. ² *Ibid.*, p. 313. ³ *Ibid.*, p. 44.

direction, a new spirit, and a new organisation were urgently required. It took Chadwick another two years to work out in full the remedies he proposed to meet the situation, but we may note briefly here the main points of the preliminary sketch given in the *Sanitary Report*. He insisted, in the first place, that all arrangements for drainage and road construction must for the sake of efficiency and economy be brought together into a single public service. These duties should devolve upon the existing machinery of Commissions of Sewers, extended from the metropolis to all parts of the country, "revised as to jurisdiction, and amended and strengthened as to power and responsibility."¹ Secondly, the supply of water should be entrusted to "the most eligible local administrative body."² This would generally be the drainage and cleansing authority, but at any rate it should be a public body—water supply should be removed from private hands. Chadwick had been greatly impressed by that most successful of early essays in collective regulation and enterprise, the municipal gasworks of Manchester, established under a Local Act in 1817, and managed by an elected committee of ratepayers. Another notable example of public enterprise was reported to him from Bath, where the Corporation supplied more than three-quarters of the town, in competition with four small private companies; their water rents amounted to £3,233 2s., their expenses to no more than £449 3s. 3d., leaving a profit of £2,783 18s. 9d., which went to the reduction of the borough rate.³ Chadwick had not yet fully elaborated his theory of public utilities, but in the *Sanitary Report*, with these practical instances from Manchester and Bath before him, he made his first authoritative pronouncement in support of public management. He recommended, finally, the appointment of full-time district medical officers, charged with the duty of hunting out the physical causes of disease in the houses of the poor. A "single securely-qualified and well-appointed responsible officer," he considered, would be far more effective than the local Boards of Health recently suggested by the Report of Slaney's Select Committee.⁴

Chadwick thus revealed that in local sanitary administration his ideal was a compact Commission, appointed by the Govern-

¹ *Sanitary Report*, p. 339.

² *Ibid.*, p. 80.

³ Rev. Whitwell Elvin to E. C., 11 January 1842. ⁴ *Sanitary Report*, p. 356.

ment, executing or supervising public works through a competent full-time engineer, and working in co-operation with a qualified medical officer of health. As he had earlier tried to ensure that the relief of the poor should be in the hands, not of elected Guardians, but of a paid permanent official, so he now insisted that the public health was not a matter to be left to local representative bodies. Nearly ten years of day-to-day contact with the corruption and petty intrigue of vestry politicians had taught him a profound and bitter contempt for the workings of representative government. From the Poor Law Report down to this latest product of his inquisitive spirit he had been displaying in countless instances the ineptitude, the stupidity, and the greed of the men who were thrown up promiscuously by the process of election. Under this system the public service had come to be regarded principally as the means of rewarding the elector who "voted straight"; a tailor would sell his support for a legal clerkship, or the voice of an "illiterate tinman, a leading speaker at parish meetings," would be bought for a surveyorship worth £150 a year.¹ Besides the corruption it bred, representative government led to a further mischievous error—the belief that the public business could best be conducted by unpaid amateurs, elected to serve their turn as civic officers, as Highway Surveyors, Paving Trustees, Sewers Commissioners, or Town Councillors. This implied, first, that the public business offered no problems which could not be solved by any gentleman who gave to it a fraction of the attention he gave to his own affairs; secondly, that any gentleman who served in such a capacity would look for no reward other than the respect of his fellow citizens and the approval of his conscience. Both these assumptions were vigorously denied by Chadwick. Throughout his career he was combating this legacy from a leisurely, aristocratic tradition, the belief that "unpaid dilettante service is cheap service,"² and opposing to it the principle of administration by salaried experts; for these, being paid, could be held accountable, they possessed special aptitude for the work, and they stood above local conflicts, viewing the local scene from the impartial aspect of the wider community.

¹ *Sanitary Report*, p. 332. ² E. C. to ? (Lord Morpeth), n.d., c. May 1848.

CHAPTER III

INTERMENTS REPORT, 1843

MORE copies of the *Sanitary Report* were sold by the Stationery Office than of any previous Government publication, to the great satisfaction of the reformers who believed that "its good effect would be (as much almost as by legislation) created by its private influence on society."¹ J. S. Mill, to whom Chadwick had sent the Report in proof, could not find "a single erroneous or questionable position in it, while there is the strength and largeness of practical views which are characteristic of all you do"; the style and arrangement appalled him, however, and he wished that Chadwick would learn "some of the forms of scientific exposition of which my friend Comte makes such superfluous use."² The Home Secretary, Sir James Graham, declined to present the report to Her Majesty, but his vigilance was circumvented by Sir James Clark, the Queen's physician, who gave a copy to Baron Stockmar, "purposely to get him to read the part on Windsor";³ (one investigator had described the Royal Borough as incomparably the worst of all the towns he had visited). To many the astounding details came with all the force of a revelation. The medical superintendent of Arkwright's mill at Cromford, for example, despite his opportunities for observation, confessed that he had not previously been aware of the great mortality of the poor as compared with those in more easy circumstances.⁴ But others were less impressed, and where they were not openly incredulous greeted the report with the defensive reactions of disgust or derision. E. C. Tufnell, one of the Assistant Poor Law Commissioners, wrote lightly, "your Report reads like one of Ainsworth's novels, and will I think furnish some good hints

¹ J. H. Burton to E. C., 29 September 1842.

² J. S. Mill to E. C., April 1842.

³ Sir James Clark to E. C., 21 August 1842.

⁴ T. Poyson to E. C., 29 March 1843.

for deepening the horrors of his next Jack Sheppard production."¹ In Paris a squeamish editor suppressed a review of the report for the *Siecle* because of its dirty subject.² Many others shrugged their shoulders when it was mentioned to them, Chadwick recalled later, as much to say, "It is all very fine but you see *the people* like dirt and prefer dirt, and you cannot force them to spend money against their will."³

By many engineers, however, the practical value of the report was instantly recognised. At the Putney College Butler Williams began to use it at once as a text-book for his classes in civil engineering; and his students, following up Chadwick's suggestions, carried out experimental surveys of Putney and Wandsworth, and prepared the first contour map of the City of London. When William Lindley was engaged to rebuild Hamburg after the disastrous fire of 1842, he proposed to design the city's sewerage on Chadwick's principles of flushing and water carriage. The City Engineer and City Architect promptly reported against his plan, basing their objections on passages from the *Sanitary Report*, which they were convinced had been written to indict the evil effects of all sewers upon the health of the population. Not until Chadwick had sent Lindley written confirmation of his real views would the Hamburg Senate allow him to proceed with his scheme.⁴

In political circles some, like Lord Howick, were now learning with "astonishment and dismay" of the state of the towns, and were beginning to ask themselves whether "we have trusted too much in a case where it does not apply, to the maxim that men should be left to take care of their own interests," whether it would not have been better if "even at the price of some sacrifice of productive power and of national wealth, the State had earlier interfered, and had taken measures which should have opposed some check to so vast an increase of population, without some corresponding increase in the machinery for maintaining order and decency, and diffusing the blessings of education and religion."⁵ Lord Normanby was already a convert; he had thought the account in the *Fever Report* of 1838 exaggerated, till

¹ E. C. Tufnell to E. C., 27 April 1842.

² W. E. Hickson to E. C., 20 January 1843.

³ E. C. to Sir Henry de la Beche, 25 December 1843.

⁴ William Lindley to E. C., 18 April and 13 June 1843.

⁵ *Hansard*, vol. lxxiv, p. 647, 3 May 1844.

Southwood Smith conducted him on a tour of Bethnal Green and Whitechapel.¹ Ashley also, with the Doctor as guide, had been to see and smell for himself the houses in Cowyard, Blue Anchor, and Baker's Court.² But the Government, in the person of Sir James Graham, maintained a wary reserve. Too many interests must be disturbed, too many tenacious preconceptions abandoned, too many innovations in the scope and structure of administration accepted, for any hasty decision to be made by a Home Secretary in 1842, whether he were a Whig or a Tory. The Health of Towns Commission, described in the next chapter, gave the Government the breathing space and the strengthened arguments that they required. Thus, a few individuals, like Ashley and Normanby, were already convinced that the State must stretch out its power to avert the yearly doom of disease and death in the towns; many more, like Howick, were uneasily aware that past indifference and inactivity had produced a problem whose solution could not much longer be postponed; but by a vast inertia the ideas of most legislators continued to move in the deep grooves cut by habit and comfortable thinking. The time for legislation had not yet come.

Ignorance and interest found a colour of theory for their opposition in the teachings of that complacent school of philosophers who claimed to see in the operations of misery and disease the workings of beneficent economic laws. "That error of Mr. Malthus stands as a wall against measures of sanitary improvement," cried Chadwick in exasperation.³ It met him at the outset of his public health campaign as it had met him ten years earlier when he began his Poor Law investigations, that fatalistic view that the pressure of population must in the nature of things lead to a large amount of unavoidable distress, that "undefined optimism" which found ground for inaction in the belief that the ravages of disease formed a natural or positive check, a "terrible corrective,"⁴ to man's tendency to multiply beyond the means of subsistence. Wars and plagues, thought McCulloch, tended to place an old country in the situation of a colony: they lessened the number of inhabitants without in most cases lessening the capital which existed for their maintenance. This assertion Chadwick

¹ C. L. Lewes, *Dr. Southwood Smith*, pp. 69-70.

² *Ibid.*, and E. Hodder, *op. cit.*, vol. i, p. 361.

³ E. C. to J. H. Burton, 31 July 1844.

⁴ *Sanitary Report*, p. 176.

strenuously denied, in his reports and in discussions at the Political Economy Club. Such figures as he had been able to collect, from America and Europe as well as Great Britain, showed that districts where mortality was greatest had also the highest birth rate, and that the losses due to pestilence were more than made up by new births. "In one of the illdrained and illcleansed and over crowded courts where there was a heavy mortality I once observed, to one of the women living there: 'Why the undertaker is never absent from this place.' 'No, nor the midwife either,' was the reply and it was then crowded with young and puny children."¹ Nor was it true that the "corrective fates" left the capital of a country unchanged, since they swept away many workers at the height of their productive powers, diminishing the proportion of adult workers and increasing the proportion of dependent children and widows. The farmer would soon give his opinion of McCulloch's "corrective" if of the colts born on his farm he could rear only one-half, and if the average working period of those reared were reduced by disease from ten years to five!²

Let it be granted then, said Chadwick, that the ratios of Malthus' hypothesis were as well founded as the theory of gravitation; one could admit the tendency of all stones to fall to the centre of the earth, and yet deny that in actual experience any stones actually did so fall.³ The truth was that the belief was quite fallacious that the economic condition of the labouring classes was depressed. In that Malthusian stronghold, the Political Economy Club, he was amazed to find the impression that the wages of cotton workers were continually decreasing under the inexorable competition of excessive numbers. Another unfounded deduction of the "hypothesisists"! Actually, he pointed out, an analysis of the purchasing power of the wages now paid as compared with

¹ MS. notes, n.d. Nearly half a century later Chadwick claimed that he had told Malthus at the Political Economy Club, just before his death in 1834, "the fact of the quick reproduction of human life in the high rated districts of death. He was quite astonished that this point had escaped his observation." (*National Health*, ed. B. W. Richardson, 1890, p. 313.)

² "Heads of Answer to J. McCulloch's positions as to pestilence being corrective of population" (MS. notes of a paper read to the Political Economy Club in June 1845). See also the detailed discussion in *Sanitary Report*, pp. 182-3, 193-5, 204-5.

³ "Heads of Answer to J. McCulloch's positions as to pestilence being corrective of population."

those of an earlier generation proved exactly the contrary. In 1792, a Lancashire manufacturer told Chadwick in 1841, his father paid his spinners 4s. 4d. a week; he himself paid them 8s. 8d. or more—and the price of provisions was as high in 1792, and of clothing was 30 or 40 per cent higher.¹ In Stockport, Chadwick informed Sir Robert Peel in December 1843, wages had recently averaged 11s. per head for man, woman, and child, twice the amount paid in the agricultural districts. Such wages for cotton operatives were "beyond their capacity of frugal application."² Whenever he heard it objected that the working classes could not afford to pay for improved housing and drainage, he would point to the amount of their "self-imposed taxation" as reflected in the excise returns. On liquor, beer, tobacco, and snuff, they spent £45 or £50 millions annually, more than the whole expenditure of the Government on the administration of justice, the civil service, and the Army and Navy. The town of Bury alone, with a population of 25,000, spent £54,190 each year on beer and spirits, £2 3s. 4d. a head, enough to pay the rent and taxes for 6,770 new cottages at £8 per annum each.³

Fever was born of distress—so ran the easy generalisation of the politicians and economists, the corollary being that prosperity was the one cure for epidemics. The records of the fever hospitals, Chadwick replied, showed that the pestilential miasma which caused disease was governed more by the weather than by the state of the market. Liverpool and Manchester, the two most thriving cities in the country, were also the most unhealthy. It was true, of course, that the districts where the greatest mortality occurred were probably the poorest, but not invariably so. It was the physical circumstances of place which determined the mortality rate, and in the American cities, New York and Philadelphia for example, the mortality was greater even than in Dublin. So much for the argument that high wages and American democracy were the best remedies for all social evils!⁴

¹ *Sanitary Report*, p. 188.

² "Memorandum on present condition of Manufacturing Districts," December 1843; *Peel Papers*, British Museum Add. MSS., vol. 40, 537, ff. 132-159.

³ *Sanitary Report*, p. 227. Also "Draft Memoranda on the exposition of the Budget," MS. fragment, n.d.

⁴ E. C. to Lord Francis Egerton, 1 October 1845.

The population theory of Malthus was Chadwick's favourite example of the unverified assumptions on which economists based their recommendations and statesmen built their policies. He was on firm ground when he asserted that the rise in average real incomes, and the concurrent increase in both population and wealth, showed that the limits of subsistence had not in fact been reached. He was right to urge against Malthus that in the Britain of his day the Nemesis of decreasing returns was held at bay by improvements in agriculture and in the technique of production, that "the labourer goes into the market as a producer, rather than as a competitor."¹ In the face of that loose complacency which, from a dread of over-population, saw good in a heavy death rate, he did right to point out, in terms that economists and industrialists could understand, that every labourer who, over and above his subsistence, produced a surplus to make it worth while to employ him, possessed a pecuniary value; that just as much as the destruction of a machine, his death was an economic loss; and that, simply from an economic point of view, the more there were of such labourers the better for the community, just as the community was all the better the more it had of productive machines in active employment.² Unfortunately, however, while deriding the smugness which characterised many of Malthus's followers, he adopted certain complacent doctrines of his own. He was led to argue that there was little in the circumstances of the lower classes that good drains and pure water and improved housing, combined with intelligent administrative arrangements, could not cure. Their diet was ample enough; a working woman, he maintained, to lose children and reproduce them again in such rapid succession, must be robust and well-nourished, and her physique could not be reduced and attenuated by starvation.³ Their hours of work were not excessive; Chadwick, who drove himself hard for anything up to sixteen hours a day, probably never felt the full force of the argument for a ten-hour day; and, as he told Peel, while strikes for higher wages were common enough, he had never heard of one for shorter hours.⁴ As for their

¹ E. C. to Archibald Allison, 5 August 1840.

² *Select Committee on Railway Labourers*, Q. 2208; *P.P.* 1846 vol. xii, p. 1.

³ E. C. to John Wilson, 5 January 1844.

⁴ E. C. to Sir Robert Peel, 16 May 1846; *Peel Papers*, British Museum Add. MSS., vol. 40, 592, f. 6.

wages, they were actually in many cases excessive, in view of the recipients' ignorance and lack of self-control; and the excess was too often divided between the publican, the Dissenting minister, and the Trade Union agitator. It is not surprising then that between Malthus, who told them they could never be better off, and Chadwick, who told them that they were better off than they thought, the working classes could see little to choose.

The *Sanitary Report* was presented on 9 July 1842, and nearly a year was to elapse before Chadwick opened the extended inquiry under the Health of Towns Commission. The intervening months were occupied in preparing a Supplementary Report on Interments in Towns, a subject omitted from the *Sanitary Report* on account of its size and special character. A final chapter, and that the grimmest, remained to be added to his sanitary survey, and without a break he plunged single-handed into what was to prove the most disagreeable and thankless of his investigations.

The overcrowding of the graveyards was only a special aspect of the central problem of civic police which the enormous growth of the population had thrust into the unready hands of nineteenth-century administrators. As the housing accommodation of the metropolis was insufficient for the number of living Londoners, so the graveyard space was insufficient for the number of the dead. The channels of habit had been cut deep by the centuries; and even when the churchyard was hemmed in by buildings on all sides, and ten parishioners required burial where one had been buried before, the custom maintained its hold of burying in the holy ground within the walls of "God's Acre." And now, in the 218 acres of London's burial grounds, 20,000 adults and nearly 30,000 youths and children were interred each year—a million and a half bodies within the last generation. In the cemeteries of German towns—German experience afforded Chadwick the standard by which to judge English conditions—the number of interments to the acre averaged 110 each year. In the same area the London gravedigger had to find room for probably twice that number of bodies annually, and perhaps for ten, twenty, or even thirty times as many. Faced by the physical impossibility of

burying more corpses than could be accommodated by the ground at his disposal, he had been driven to gross expedients. One body was scarcely laid in the soil before it was rudely disturbed to admit another. At the burial ground of the Tottenham Court Road chapel, seven or eight adults and twenty or thirty children were crowded into each grave, the whole corrupting mass being temporarily covered by a light layer of earth after each new interment. When the close-packed earth could hold no more, bodies were broken and hewn into pieces to fit them into a smaller space. In one corner of the churchyard of St. Olave and St. John in Tooley Street a pit sixteen feet deep and twelve feet square was dug for the reception of bones thrown up by the sexton's spade. Church vaults were never filled up, because the older coffins mysteriously disappeared, the bones being wheeled away in cartloads as farm manure, while the lead was stripped from the coffins and sold by the gravedigger.

For the sanitary reformers, believing that decomposing animal matter was injurious to health, the Grand Guignol horrors of the churchyards were deepened by a further fact—that an epidemic might well be started by exposing a putrid body. London's two hundred graveyards gave off incessantly the exhalations of decay, and the morbid matter, whose deadliness was shown if it got into the slightest cut, might be breathed into the lungs when it was diffused into the atmosphere. Plague, typhus, or cholera might be generated in this way amongst the overcrowded town populations, just as "dissecting-room fever" had been known to strike down the students and attendants who handled the cadavers in the medical schools. It was on this deduction from the crude pythogenic theory that Dr. G. A. Walker, "Walker of the Graveyards," based the attack on the dangers of intramural interment which he launched in 1837. In the Commons the campaign was led by W. A. Mackinnon, another of those parliamentary francs-tireurs who from time to time ranged themselves at Chadwick's side, banging away enthusiastically at some well-loved target—the soap duties, quarantine, factory smoke, or the window tax—and more often than not embarrassing him with their half-baked schemes and uncontrollable tendencies to fly off at a tangent. On 8 March 1842 Mackinnon obtained a Select Committee, the Home Secretary, Sir James Graham, admitting that some legislative

interference was "absolutely necessary."¹ By August he was ready with the draft of a Bill to implement the findings of his Committee; and Graham, hesitating to move against the religious and customary prejudices and the strong sectional interests with which the subject was hedged, turned for fuller information to Chadwick.

Mackinnon had been concerned only to abate the dangers and indecencies of existing burial practices by ensuring that interment should take place at a distance from the boundaries of the town, the arrangements being controlled by a parochial "committee of health" under the general supervision of the diocesan or of a Central Board in London. Chadwick at once opened up the attack on a wider front. In a demonstration of remarkable power, he confronted the social conscience of the law-making classes, numbed as it was by indifference, ignorance, and the anodyne of interest, with a picture of the working-class family, caught in a web of custom and economic circumstance which could be broken only by the benevolent strength of the central Government. The grossness and muddle of the desecrated graveyards seem to have touched something deep in Chadwick. Perhaps in no other report of his is the criticism of unregulated private enterprise so fierce, and the revelation, how often a man's self-interest shaped his opinions, so ruthless. We see him probing his witnesses with sharp questioning—the gravediggers, prematurely aged, with their shrunken figures and cadaverous aspect, solemnly swearing to the healthiness of their occupation; the robust keeper of a dissecting theatre who had never suffered ill effects (though, to be sure, his assistants did the most dangerous and dirty work, and eight of them had died, some being dissected in the very theatre in which they were employed);² the employers, shrugging away the early deaths of their workmen, with "But they drink—they are a drunken set"³; the cemetery owners adding to their profits by "working the earth close"; the secretaries of the burial clubs revealing the fantastic finances of their societies, the undertakers urging a "respectable funeral," the clergymen pocketing their fees and perquisites, "a silk scarf of three yards and a half, a silk hatband, and black kid gloves."⁴ We can feel his mounting

¹ *Hansard*, vol lxi, pp. 281–3, 8 March 1842.

² *Report on Interment in Towns*, p. 8.

³ *Ibid.*, p. 9.

⁴ *Ibid.*, p. 49.

impatience with their shifts and equivocations, and share something of the enthusiasm with which he invokes the power of Government to tidy up the mess.

His first step was to show that in a startlingly high proportion of cases in London and the industrial towns, one room was the sole accommodation for the whole family. "It is their bedroom, their kitchen, their wash-house, their sitting-room, their dining-room; and, when they do not follow any outdoor occupation, it is frequently their workroom and their shop. In this one room they are born, and live, and sleep, and die amidst the other inmates."¹ Out of 1,465 families in the inner ward of St. George's, Hanover Square, 929 had a single room and 408 others had only two; of the same families 623 had one bed each, another 638 only two. In Marylebone conditions were even worse. Out of 608 families, 159 occupied part of a room, 382 had one room, and 61 had two; only 5 families had three rooms, and only 1 had four. Thus, in St. George's about one family in eleven possessed a third room where a corpse might be laid out; in Marylebone only one in a hundred.² In the one-roomed homes of the poor the body must await burial, while the normal life of the family went on around it, the family eating, sleeping, working, the children playing, in close proximity to a corpse perhaps still covered with the visible marks of disease. It might remain there the best part of a fortnight, since for the working classes Sunday was the one day free on which they could bury their dead, and if a death took place in the middle of the week, the body was frequently kept until the Sunday week, while subscriptions were being collected. Corpses had been retained, according to one undertaker, even after the coffins had been tapped to let out the liquid products of decomposition, till maggots were seen crawling about the floor and over the trestles on which the tapped coffin was supported, till, as the body was borne away, escaping matter ran down the shoulders of the bearers.³ When the cause of death was an infectious disease, the results could be predicted. The louse, carrier of typhus, deserted the chilling body for a warmer host, and a victim of typhus had been known to be followed very shortly to the grave by five of his children and two or three visitors. Chadwick summed up the inescapable conclusion: if four out of every five working-class families had only

¹ *Report on Interment in Towns*, p. 31.

² *Ibid.*, pp. 31–2.

³ *Ibid.*, p. 38.

one room, every one of 20,000 deaths a year in London must be accompanied by the dreadful incidents his witnesses had described; and, furthermore, in the case of every one of the 4,000 deaths from epidemic disease included in that total, the surviving relatives must be in acute danger of being struck down by the same infection.¹

Why, he asked, picking up the next link in the sordid chain, why was burial so long delayed amongst the lower classes? The answer plumbed the depths of human habit and social custom. In the great majority of cases the reason was the high cost of dying, the lack of money to defray the expenses of interment. The greatest dread of the poor man was to be buried as a pauper, to be carried in a plain parish coffin borne by pauper bearers to the "bone-house," the last resting-place for suicides and those unfortunates whom nobody claimed as friend or relative. To avert that humiliation, and to secure respectable interment, was perhaps the most powerful motive which drove him. It was estimated that a third or a fourth of the £24,000,000 in the savings banks was earmarked for funeral expenses, and even paupers were sometimes found at their deaths to have concealed a hoard to pay for their own decent burial. Much of the business of the small-debt courts was concerned with the enforcement of undertakers' bills; and one undertaker told Chadwick that if they did not give time for payment to two-thirds of their customers, the poor would not be able to bury their dead at all.

This "pride" of the working classes, rooted in long custom and in the courage of self-respect struggling in adversity, made them the easy victims of the burial club and the undertaker. In Westminster, Marylebone, Finsbury, Tower Hamlets, and the City, there were about two hundred burial societies, organised usually by one of the small, grubbing undertakers and the publican of the tavern where the meetings were held. Membership ranged from 100 to 800 and deposits from £90 to £1,000; contributors usually paid 1½d. or 2d., and relatives received a benefit of from £5 to £10. The undertaker president profited by the funeral orders, while the publican treasurer had the members' custom (and that of the undertakers' mates, who were notoriously heavy drinkers), and in addition the handling of the money, which he usually banked

¹ *Report on Interment in Towns*, p. 43.

with his brewer at four or five per cent interest. As a form of insurance, Chadwick demonstrated, this system was completely unsound. Actuaries showed that the premiums were far too high, that one Preston society was charging 7s. 10d., for example, for a risk covered for 3s. 9d. in the tables of an assurance company. Moreover, since it was to the interest of the undertaker president to admit bad lives, the societies frequently failed. Another weakness was the rule that all members, whatever their age, paid the same rate; many clubs in consequence were broken up by the younger men, in revolt against the excessive demands made upon them. There was some evidence, too, that multiple insurances on the lives of children, by placing "interests in operation against moral duties," acted as bounties on neglect and infanticide. A child could be buried for £1 or £1 10s.; the clubs allowed from £3 to £5 for the purpose, and the child might well be in four or five societies. Hence the common phrase in Manchester: "Aye, aye, that child will not live; it is in the burial club."¹

By this time Chadwick was far beyond the range of previous explorers of the subject, penetrating an uncharted region that W. A. Mackinnon and "Walker of the Graveyards" had not dared to enter—and whither Sir James Graham did not attempt to follow him. He now turned to make a merciless exposure of the trade in burial. On the mortality returns of the previous three years the number of deaths in London averaged 114 a day. Competing for those 114 bodies, according to the Post Office Directory, there were 275 undertakers. In addition, however, there were at least a thousand, perhaps as many as three thousand, lesser tradesmen—drapers, tailors, publicans, carpenters, cabinet-makers, upholsterers; auctioneers—who displayed the undertaker's insignia in the hope of catching one or two orders a year. All these obtained their funeral supplies from one of the principals in the trade, and in the last analysis it was some sixty of the leading undertakers who performed the real service, the inferior agents merely interposing their unnecessary offices and stepping up the charges to allow for their own remuneration. An intense competition between a great and growing number of entrepreneurs—so the funeral trade appeared; but, in defiance of the teaching of the economists, the result was heightened prices. The

¹ *Report on Interment in Towns*, p. 64.

explanation was simple: there was no real competition, because there was no real freedom of choice by the consumer. In those hours of anxiety and grief which immediately followed a death, the relatives of the deceased could scarcely go round from one undertaker to another, comparing services and haggling over prices. When a death occurred, therefore, the burial club benefits were so much "exposed prey"¹ for the undertaker. His procedure was to find out the amount of the insurance money, whether the widow was expecting £10, £15, £20 or more, and then to arrange the funeral accordingly. Once the funeral was over, the widow could not dispute the bill without laying herself open to the charge that she begrudged proper respect for the dead. The estimates therefore never came under close scrutiny. The total cost of funerals in England and Wales in one year Chadwick calculated to be not far short of five million pounds; in London alone probably nearly a million pounds was "annually thrown into the grave."² The evidence showed that that figure could be cut by at least a half.

The Commons Committee of 1842, under the influence of its chief witness, the Bishop of London, had been strongly in favour of the continuance of parochial control, and Mackinnon in his Bill³ had provided for the establishment of extramural cemeteries under the management of a parochial committee of health. Chadwick, however, expressed a lively disbelief that reform was likely from the very agency under which the present abuses had developed, and which still maintained them in the face of all protests. In Government circles it was felt that, if the parish administration had failed, the solution was to trust to the operation of natural economic forces, to that pursuit of individual profit which, as a by-product, brought about the benefit of society. Already the majority of Dissenters, who could not be admitted into consecrated ground, together with many Anglicans who were appalled by the state of the churchyards, were burying their dead in cemeteries owned by individual entrepreneurs or joint stock companies. Unfortunately, Chadwick bluntly revealed, the arrangements of the capitalists showed as little regard for health and decency as those of the parish gravediggers. More crowded

¹ *Report on Interment in Towns*, p. 52.

² *P.P.*, 1842, vol. ii, p. 603.

³ *Ibid.*, p. 70.

even than the churchyards were the private cemeteries, usually the property of an undertaker, where, as one Congregational minister described, the soil was "saturated and blackened with human remains and fragments of the dead," and "the splash of water is heard from the graves, as the coffins descend, producing a shudder in every mourner."¹ Nor were the eight joint stock cemeteries, more recently established under Private Acts, so superior as their shareholders claimed. All but one were on sites unfitted by the clayey nature of the soil or lack of drainage for interment purposes; and to squeeze out the maximum profit the companies were burying in every acre 11,000 bodies in common graves. The main effect of the Cemetery Acts, in which neither the promoters nor the Commons Committees had thought to insert the improvements suggested by the best foreign experience, had been merely to transfer the evils from the centre of London to the periphery.

In the disposal of the dead the planless operations of English capitalists and parochial authorities lagged far behind the achievements of the benevolent absolutisms of the Continent. In English political circles, however, the administrative devices of the foreigner, if referred to at all, were usually mentioned not as examples to be emulated but as awful warnings to be avoided. It was a prejudice not shared by Chadwick, who based his recommendations for reform on a close study of Continental models, and in particular the municipal cemeteries of Frankfort and Munich and the Parisian *Service des Pompes Funèbres*. With a severe logic, conceding nothing to the vested interests in burial, he sketched a radical and comprehensive scheme, which met in turn with a well-designed remedy every abuse that he had uncovered. All interments in towns, without exception, must be prohibited. The joint stock cemeteries and the private grounds must be bought out. The churchyards must be closed, their sites being kept as open spaces for the public use. In their place national cemeteries should be established, on ground selected according to scientific principles, with suitable decorations and vegetation chosen on the best artistic advice; and these publicly owned cemeteries should be managed by officers possessing appropriate qualifications. The danger and indecency arising

¹ *Report on Interment in Towns*, p. 135.

from the prolonged retention of the corpse in the one-roomed homes of the poor should be averted by providing "reception houses" (sc. mortuaries), such as those at Frankfort and Munich, to which the body was removed by the municipal authorities on the notification of death, and where it was kept under medical inspection for three days before burial. The officers in charge of the public cemeteries should be empowered to enter into contracts for the supply of funeral services and materials, the aim being the eventual extinction of the private unregulated undertaker. By such large-scale contracts the funeral expenses of the upper and middle classes might be cut by at least two-thirds, while artisans could be buried at half the present cost; the total saving in London alone would be about £350,000 a year. Apart from the cemetery owners who were to be dispossessed, the interests of three groups were affected by the scheme—the clergy, the Dissenters, and the undertakers. The clergy should be compensated for the loss of their burial fees; the Dissenting congregations who lost their graveyards should receive an equivalent space in the public cemetery. But Chadwick could see no reason to hold out promises to the hundreds of inferior tradesmen who gave themselves the title of undertaker.

It is the most courageous, the most clear-cut, the most coherent of all his schemes; but it bears on its face the prophecy of the failure which dogged it for the eight unhappy years of its history. Chadwick had forgotten nothing. He believed that he had answered by anticipation all objections, conciliating those bodies which had legitimate interests, exposing and rebutting those whose claims could not be justified. He was soon to find that to answer an argument was not to silence an opponent. He had shown that abroad the various parts of his plan were at that very moment working effectively and to the satisfaction of the people. The problem remained of convincing English statesmen that ideas which thrived under German despotism or French centralisation could bear transplanting to the freer soil of England. He concluded his report with the appeal that the Government "should only set hands to this great work, when invested with full powers to effect it completely: for at present there appears to be no alternative between doing it well or ill."¹ A Tory Home Secretary

¹ *Report on Interments in Towns*, p. 201.

of the eighteen-forties, called upon to interfere with large masses of capital, to arbitrate between the Church and the Dissenters, to lay on Government a delicate and unaccustomed burden, might well hesitate and consider that between the two absolutes of "all or nothing," "well or ill," that Chadwick presented there stretched an infinite possible series of piecemeal improvements.

There remains to be discussed what Chadwick regarded as the pivot of the whole scheme, a proposal, however, which had an independent life of its own, and so may be considered apart from the interments problem with which it was at first inseparably linked by Chadwick. This was his suggestion that local authorities should appoint medical officers of health, to perform certain necessary duties connected with the public burial service, and in addition to carry out other measures of medical police. Here was one of the most serious gaps in the defences of the public health. For the cure of disease by tending and dosing the sick Liverpool, for example, had 50 physicians and 250 surgeons, apothecaries, and druggists; for its prevention, by investigating and removing its causes, the city employed not one medical officer. Nor did the City of London—though it spent £72,000 a year on hospitals and medical charities.

There were, it was true, the 2,327 medical officers in the Poor Law service.¹ But these were cramped and starved in their activities by the parsimony of Somerset House; they were subjected to unwholesome influences from property owners amongst the Guardians; and their miserable pay did not free them from the necessity of attending private patients, so that, as Chadwick testified, many of them "hold office merely to keep out rivals or interlopers from their field of private practice; they serve very unwillingly and are in perpetual hostility with the Boards of Guardians."²

¹ Chadwick's figure in a letter to Normanby, 3 February 1841. In a memorandum for Sir James Graham, G. C. Lewis put the figure for 1844 at 2,825; these were paid £130,198 in salaries and £21,244 in midwifery and surgical fees, a total of £151,442. (10 January 1846; *Peel Papers*, British Museum Add. MSS., vol. 40,582, f. 202).

² "College of Physicians reply to. Controversy with the College of Physicians and its jealousy of the first General Board of Health," MS., n.d. (c. Oct.-Dec. 1848).

In the England of the eighteen-forties, indeed, the medical profession as a whole had great need to put its house in order. Of 1,830 medical men who presented themselves to fill offices under the Poor Law Commission in 1834, 327 had not been examined in surgery, 323 had not been examined in medicine; and 233 had not been examined by any medical body at all.¹ The twin oligarchies of the Physicians and the Surgeons were less concerned to advance medical science and raise professional standards, than to assert the superiority of their members in the face of competition from "Scotch doctors," the lowly Apothecaries, and the "general practitioners" who were now being turned out in increasing numbers by the Hospital Schools. The profession was expanding rapidly, and in the absence of a public criterion of competency and a recognised course of training it abounded with opportunities for quackery, abuses of practice, and the toleration of the unqualified and the inefficient. It is little to be wondered at that in the social controversies of the time the spokesmen of medicine sometimes cut a very poor figure; that one Select Committee should severely comment on "the ignorance of some who set up for surgical practitioners";² and that a Minister should be able to find, when he wanted them, 43 doctors out of 48 in favour of a measure to enable children over twelve years of age to work a full day in the factories—so reversing the findings of a Royal Commission two years earlier, before which only one doctor out of 31 supported the same proposal.³ Nevertheless, as Ashley bore witness, in the factory agitation he received more help from the medical men than from the clergy, who only too often were "cowed by capital and power."⁴ And from the first, when Chadwick sent Arnott, Kay, and Southwood Smith on their tour of investigation in 1838, the doctors were the strongest supporters of the sanitary movement, from the Queen's physician, Sir James Clark, and the University professor, W. A. Guy, down to the dispensary and hospital physicians, Joseph Toynbee, Thomas Laycock, William Duncan, and the unnamed rank and file of the

¹ Speech by Sir Benjamin Hawes on Second Reading of Medical Reform Bill; *Hansard*, vol. lvii, pp. 329-33, 17 March 1841.

² *Select Committee on the Factory Act, P.P.*, 1841, vol. ix, p. 8.

³ *Hansard*, vol. xxiii, pp. 739, 746, 9 May 1836.

⁴ E. Hodder. *Life and Work of the Seventh Earl of Shaftesbury*, vol. ii, p. 209; vol. i, p. 346.

Union surgeons and general practitioners. "Of all the professions, the members of the medical profession are the shortest lived and the poorest," said Southwood Smith, speaking at a public meeting to raise a subscription for the family of Dr. J. R. Lynch, a brilliant young surgeon whose life had been cut short by a fever contracted in the slums.¹ Visiting patients in their one-roomed homes, and encountering some of the same hazards and discomforts, they saw the obverse of that splendid picture of power and wealth which dazzled the eyes of the majority of the ruling classes.²

While welcoming these allies, Chadwick was watchful of their pretensions. Medicine had its part to play in the defence of the public health, but it was not the pre-eminent rôle that most doctors would claim for it. The doctor's efforts must be strictly subordinated to those of the engineer and the administrator; and in proportion as the sanitarians were successful in eliminating the causes of disease from the environment, they would render less necessary the traditional ministrations of the medical man. In 1843 the public medical service was represented only by the Union surgeons, whose cheapness and servility were despised and resented by their fellow practitioners. Yet the publicly employed medical officers, if their status and qualifications were improved and the scope of their duties widened, could perform more valuable services to society than the private dealers in physic, concerned as these were with the effects of disease, not its causes.

Already in the *Sanitary Report* Chadwick had urged the appointment of a full-time district medical officer with superior qualifications. If burial were to become a public service, such an appointment would be essential. It would be the duty of the officer of health to inspect the corpse and note the cause of death, to give instructions where necessary for its removal to the

¹ *Health of Towns: Report of the Speeches of Edwin Chadwick, Esq., Dr. Southwood Smith, Richard Taylor, Esq., James Anderton, Esq., and others* (pamphlet), 1847, p. 10.

² "Often the family doctor mingles in the crowd of mill-people as they leave at night and greets them again in the early morning as they congregate to their toils without his having, meanwhile, pressed his pillow. By the way it is a curious sight—the swarming streets at a quarter past five of a cold stormy winter morning. Who but this poor drudge sees it? Most educated people who live on the spot don't know that the labourers, men, women, and children, rise at five, be the weather fine or foul at the sound of the bell to their work. . . ." (Dr. John Robertson to Mrs. Chadwick, 14 February 1845.)

reception house, and supply the relatives with a tariff of the prices of burial. "The ordinary service of such an officer would consist of the verification of the fact and cause of death, and its due civic registration."¹ This would appear to be a very oblique entry upon the duties of a Medical Officer of Health, as the term is now understood, but there were very strong reasons why Chadwick should stress this and other functions which in modern society are performed by the general practitioner, the registrar, and the undertaker. It was a great disappointment to Chadwick to find that the Registration Act of 1836 was failing to produce all the legal and scientific benefits he had expected. The data afforded by the existing system of recording deaths were of little value to the lawyer in determining titles to succession, to the actuary in constructing life tables, or to the doctor and administrator in seeking to ascertain the effect of occupation and locality on health and mortality. The only qualifications stipulated for the local registrars were that they should be resident in the district, solvent, and free from clashing duties. Many of them were political appointees, and so notoriously unsuited to their functions that, as Chadwick declared, it would have been better even from the party point of view to have given them "expensive outfits and to have sent them for example as justices to Sierra Leone or to the West India Islands, to any part of the Empire except to the towns where they were known."² Furthermore, it was not required of them to visit the house of the deceased and enter the details on the spot. The only securities against foul play lay in the suspicions of neighbours and the alertness of the parish beadle or constable. Most of the local registrars could tell of doubtful cases which had eluded these flimsy safeguards. How many children perished from overdoses of "quietness"? Chadwick wondered. How many died after being treated for croup and pneumonia by unqualified practitioners, such as druggists, who were in attendance at the death of one infant out of every four? How many were murdered for the burial money? How easy, again, it was to commit a fraud, when, as at present, any person might go to the registrar's office to record a death, and when, for all the registrar knew, there might be no such death, no such body, and even no such house!

¹ *Report on Interment in Towns*, p. 159.

² E. C. to ? (probably Lord John Russell), 8 January 1841.

Let it be insisted, however, that the registration of death should take place on the spot and on view of the body by a qualified medical officer, and all these opportunities for fraud and secret murder would disappear. It was a sound argument, but the problem was to be solved along different lines when the attendance of the "family doctor" ceased to be a luxury out of reach of most working-class homes. Greater interest attaches to Chadwick's second main argument. A public medical officer would occupy a vantage point from which he could bring under one informed view all the causes of disease in his locality and the possible means of eradicating them. It had long been recognised that the military or naval surgeon, such as William Lind or Gilbert Blane, spoke with peculiar authority; this was because his opinions were the fruit of constant observation of the behaviour of large bodies of men, living in uniform conditions, which could be changed at will and compared for purposes of experiment. In the great towns the same opportunity occurred for observing large populations living under similar circumstances, and studying their response to a changed environment. An officer of health, assembling and scrutinising the statistics of mortality and sickness, would furnish the accurate diagnosis on which the preventive action of the administrator could be based. Briefly Chadwick sketched the essential qualities of such an officer. He would need to possess special technical qualifications; the only safe proof of a candidate's fitness, Chadwick suggested, would be evidence that he had already conducted some piece of successful research in the field of preventive medicine. His freedom of action and opinion must be protected by two essential safeguards. First, he must exercise his functions in independence of the local administrative body, since this would probably contain the chief employers, connection with whom would expose him to suspicion of partiality and undermine his influence with the lower classes. It was necessary, secondly, that he should devote the whole of his time to his public duties, since in a conflict between the demands of a private practice and of a public office, it would inevitably be the latter which would suffer.

In the Report on Interments the officer of health appears chiefly in the unusual character of a recorder of deaths and a superintendent of burials. Within less than twelve months, how-

ever, Chadwick was submitting to the Health of Towns Commission an interesting memorandum, worthy of more attention than it received, in which the appointment takes on the lineaments with which a later generation became familiar.¹ In this paper the functions of the medical officer are greatly widened and enriched. He is required to inspect his district periodically, tracing the signs of sickness among the population to their source in homes and places of work, and enforcing the law against those responsible for removable nuisances and wanton neglect. On the outbreak of an epidemic, he is to control all measures to combat it, issuing instructions to Union surgeons and relieving officers, surveyors, scavengers, police, and other public servants. He should undertake the analysis of matters sold as food or drink, taking measures to stop the sale of dangerous and unwholesome adulterations. He is to direct the arrangements for vaccination, and inspect all children who apply for certificates of age, strength, and bodily ability for labour in mines and factories. He is required, finally, to present an annual report, giving the statistics of sickness and mortality for his district, comparing it in these respects with other places, analysing the causes of each class of cases, and specifying those causes which he considered removable or preventable for the future.

In all this Chadwick anticipates intelligently the later emergence and development of the Medical Officer of Health, but it was to take nearly seventy years to establish the conditions in which that most valuable of all local officials could function, as Chadwick desired, as an impartial adviser and guardian of the public, independent of local influences, and shielded against the intimidation of threatened interests. When the proposal was first made, the leaders of the medical profession were slow to recognise its importance; and the politicians at once objected that it would be "unpopular." As one critic wrote, the powers such an officer would wield were "far too vague and arbitrary; and would be considered an infringement of the liberty of the subject, intolerable in a free country. A man's home would no longer be his castle, into which no one must penetrate without a special

¹ "Health of Towns Improvements. Draft Clauses for consideration in respect to the appointment and duties of Officers of Health," MS., n.d. (c. December 1844).

warrant."¹ In the swarming tenements of Whitechapel and Bethnal Green this talk of inviolate "castles" must have sounded strange, but the argument that the poor would resent having "little inquests" held in their homes weighed heavily with the sentimental middle classes, and diverted attention from the less questionable duties of the officer of health. It was unfortunate that the appointment should have first been presented as part of Chadwick's scheme for national cemeteries and a public burial service, and so shared the disfavour with which that scheme was generally regarded in Government circles. Not till 1846 did Chadwick's suggestions bear fruit, when Liverpool appointed the first Medical Officer of Health, William Duncan, under the terms of its new Local Act. And Duncan was engaged on conditions which ran completely counter to the principles laid down by Chadwick. The Corporation paid him £300 a year only, and allowed him to continue in private practice. For a year he acted merely as a weekly registrar of deaths; when it was urged that he might make reports on conditions in the city, the Corporation refused their consent, "and the reason given was *that if Dr. Duncan recommended any step it would be needful for the Committee to take it.*"² Fearing that this bad example might be followed by other towns, Chadwick protested energetically to the Home Secretary, and as a result in 1848 Duncan's salary was raised to £750 and he was employed on full-time health duties.

The Interments Report, containing in its sombre pages the most powerful of Chadwick's exposures of social evil and the most revolutionary of his administrative proposals, was a strange volume to emerge from a Government department in 1843. Throughout the summer its fate was in balance. In December Chadwick submitted a revised draft to Sir James Graham, assuring him that any investigator who followed the path he had trodden would find his description if anything an understatement of the evil.³ He sent the report out at last as a Christmas and New Year gift to his friends. "It was the most difficult and the most painful of the painful investigations which I have been called upon to conduct," he told Ashley, "and unless it be

¹ Thomas Stewart Traill to Dr. W. P. Alison, 25 April 1845.

² Dr. J. Sutherland to E. C., 17 February 1848.

³ E. C. to Sir James Graham, 4 December 1843.

followed by some better and more complete adoption of the measures than is usual, I intend that so far as I am concerned it shall be the last that I conduct."¹ The published report was not so strong as he would have wished, but—as he told Lord Lovelace—"I am as yet only a slave of the lamp (by Lord Althorp's breach of engagement with me)." "My report, your Lordship should remember," he continued, "had to undergo a jealous official ordeal before permission to print was obtained. I rejoice at having obtained leave to print so much."²

As Chadwick had foreseen, the report drew upon itself the hatred of the Dissenters, the cemetery companies, the undertakers, and churchmen like the Rev. Mr. Tyler, who looked like losing £800 a year if his churchyard were closed. "It warms one into impatience to see the grand plan adopted," Professor Owen had written, after seeing the first draft. "I hope you will live to see it in full operation: yours will then be—or ought to be—the most conspicuous Mausoleum in the chief National Cemetery, and a grateful people, who will only know the evils you have remedied by your descriptions in the effort to banish them, will point it out first to their children."³ But public monuments and a nation's thanks were far from Graham's mind, when he turned over this plan which coolly proposed to sweep away important profit-making interests, which trenched upon the traditional prerogatives of the Church, and threatened to stir up a buzz of sectarian jealousies. It was soon clear that he would take no step except on the heels of a strong public opinion. But one important supporter could be counted upon; the Bishop of London favoured a scheme which would rescue the clergy from the competition of the cemetery companies with their unqualified chaplains, and his influence offered the main hope of stirring the Home Secretary into activity.

¹ E. C. to Lord Ashley, 13 December 1843.

² E. C. to Lord Lovelace, 1 January 1844.

³ R. Owen to E. C., 12 February 1843.

CHAPTER IV

HEALTH OF TOWNS COMMISSION, 1843-1845

SIR JAMES GRAHAM, the Tory Home Secretary, had inherited from Lord Normanby three Bills for the drainage of towns, the improvement of boroughs, and the regulation of buildings, but he had not inherited with them also that nobleman's enthusiasm for sanitary reform. The *status quo* has rarely had a more devoted spokesman or a more skilful stonewaller than Sir James Graham. Overbearing in his manner, with a hard, limited mind, massively impenetrable to argument, he opposed all the resources of his powerful will to the social reforms of his time. He had done his best to hold back the report on the employment of women and children in the coal mines. He had—says Ashley—so terrified the Factory Inspectors that, though they shared Ashley's views on the Ten Hours Bill, they did not dare to say so.¹ But, if he resisted Ashley's "Jack Cade legislation," it was not out of a perverse obstructionism, but because, when confronted by the great social questions of the age, Graham, like Peel, was often at a genuine loss to see a practicable solution. As a deputation from the Lancashire Short Time Committees discovered in November 1841, he had "drunk too deeply at the fount of Malthusian philosophy."² For him the iron laws of the economic order—perpetual and unchanging since they were the expression of the ineradicable concupiscence of man—bound the working classes to a life which he summarised as "but eating, drinking, working, and dying." He walked in blinkers, seeing everywhere the limits set by his own preconceptions as the inescapable decrees of nature. It is, therefore, a measure of the effect of Chadwick's reports and of the advance made by the public health campaign that early in 1843 the Home Secretary decided to refer the question to a Royal

¹ E. Hodder, *Life and Work of the Seventh Earl of Shaftesbury*, vol. i, pp. 409, 418.

² *Manchester and Salford Advertiser*, 8 and 15 January 1842.

Commission. The sanitary question was moving into the sphere of practical politics. Reluctantly, impelled more by the pressure of opinion from behind and without than by the drive of inner conviction, a Tory Home Secretary was consenting to explore the ground with a view to ultimate legislation.

Graham's first move was to halt the progress of Normanby's Bills, which had twice passed the Lords and had reached their Second Reading in the Commons. This action, though it dismayed Ashley, met with Chadwick's heartiest approval, for the Whig measures, drafted by the experts of the Woods and Forests department without reference to the evidence collected by the sanitary inquiry, seemed more objectionable to him with every appearance they made.¹ He was equally pleased with Graham's next decision. From vestries and board rooms in every Sewers division of London the Government had heard rumblings of alarm and anger, and something weightier than the report of a single civil servant would be needed to batter down their defences. The Sewer Commissioners were, therefore, to be given a second hearing before a Royal Commission. Chadwick, having no fears for their verdict, welcomed the idea; an inquiry whether his principles of drainage were applicable to the Westminster sewers would in effect be an inquiry whether in Westminster there was any exception to the law of gravity! He intended, however, that the Royal Commission should do much more than listen to protesting surveyors. He was well aware of the limitations of the sanitary inquest on Great Britain he had conducted brilliantly through three laborious years. To those who, like Ashley and Normanby, pressed for immediate action on the conclusions of his report he replied that, while he had established the general principles which must guide legislation, he had not indicated the particular measures in which they were to be embodied.² The syllabus he drew up set a threefold task before the Royal Commission. It must devise the legal instruments which would ensure the efficiency of works of drainage and water

¹ It is clear from Chadwick's numerous memoranda on the subject that the Hammonds' description of these Bills as "drastic and revolutionary" (*Age of the Chartists*, p. 293) greatly overvalues their technical and administrative significance.

² "Memoranda of answers to the imputations of blame in respect to alleged delays to adopt sanitary measures," MS., 13 July 1844.

supply—for the necessary securities were so far outside the range of the old-style Local Acts that no legal draftsman could lay his hands at once upon a suitable form of clause. It must demonstrate by actual trial the practicability of the various improvements he had suggested, in particular the advantages of circular drains of tile over square drains of porous brick; and pronounce judgment on the wider questions of municipal engineering, such as the feasibility of a constant water supply. And finally, what was equally important—for it was useless to demonstrate improvements without showing how they could be paid for—it must show how, by spreading the costs over a long enough period, the burden could be fitted to the means of small property owners and working-class occupiers.¹

It was not, on paper, an unpromising list of Commissioners. Southwood Smith was not there, though he of all men next to Chadwick had the right to be heard. But it included Neil Arnott, Lyon Playfair, the chemist, Sir Henry de la Beche, the geologist, James Smith of Deanston, the famous authority on land drainage, and the zealous Professor Owen, who once declared, "I would rather achieve the effectual trapping of the sewer-vents of London than resuscitate graphically in Natural History records the strangest of the old monsters which it has pleased God to blot out of his Creation."² The sanitary cause was safe with these men. Two of the engineers Chadwick had suggested, Captain Denison of the Royal Engineers, and the younger Stephenson, were also included, together with William Cubitt, the leading building contractor in the country. Chadwick had asked for a lawyer or two; these were denied him, but in their stead Graham introduced a leavening of Parliamentary members, a Scottish Duke, Buccleuch, to act as chairman, Lord Lincoln from the Woods and Forests, and the mover of the 1840 Committee, R. A. Slaney.

By some strange whim of Graham's Chadwick himself was omitted, but he discovered at once that the chief burden of the Commission rested on his shoulders. Some of the medical and engineer Commissioners drifted off into their professional affairs, while the others, willing as they were, lacked his experience and powers of investigation. So Chadwick took full command at

¹ E. C. to Sir James Graham, 15 March 1843.

² Professor Richard Owen to E. C., 9 September 1844.

Gwydyr House, when the Commission began its meetings there on 1 June 1843; he marshalled the witnesses, he took the notes of evidence, he prepared the resolutions, and he drafted the reports. And at the same time he was confronting jealousy and mismanagement at the Poor Law office, completing his Interments Report, replying to the cross fire of four of the metropolitan Sewers Commissions, and bombarding the Home Office with memoranda on a new Buildings Regulations Bill "most preposterously devised by the palace architects."¹ He had probably never been busier nor more happy in his life.

Under Chadwick's directions, the Commission first despatched a letter with an appendix of 62 questions to the fifty towns with the highest death rates; these included the largest manufacturing towns and the principal ports, comprising a population of three millions.² But he would not let them rest content with paper evidence. The towns were divided into six districts; and in the middle of July 1843 the active Commissioners set off in ones or twos on an itinerary he had drawn up for them,³ with a paper of his instructions in their hands, to see for themselves the conditions in the most populous areas.³

At the same time, at a number of provincial towns, at Liverpool, Preston, Nottingham, York, and Chorlton-upon-Medlock, where he was acquainted with energetic friends of the cause, Chadwick put them to work to report on the state of their districts.⁴ Encouraging them with notes of approval, directing their attention to fruitful lines of investigation, occasionally making a sortie himself to inspect some well designed cemetery or the working of a constant supply system, Chadwick drove forward his team of doctors and engineers and politicians. When de la Beche retired discomfited from an argument at Windsor, he wrote with an unusual sprightliness to ask, "Into what geological hole have you got to hide your head? Come out and let us hear the rights of

¹ E. C. to A. G. Escher, 24 December 1843.

² *First Report of Health of Towns Commission*, vol. i, p. xi; *P.P.*, 1844, vol. xvii, p. 1.

³ "Minutes of Proceedings of the Commissioners for inquiring into the state of large Towns," MS. (at P.R.O.), 18 July 1843.

⁴ Dr. W. H. Duncan at Liverpool, the Rev. J. Clay at Preston, Thomas Hawkesley at Nottingham, Dr. T. Laycock at York, Dr. P. H. Holland at Chorlton-upon-Medlock.

it."¹ To Dr. Laycock, who was preparing a report on York, he suggested that an estimate should be made of the number of medical practitioners whose income was derived from attending cases of zymotic disease amongst self-supporting labourers. "Do not flinch," he added, "at estimating how many would be dispensed with from York or enabled to transfer their labours to the colonies or to productive industry if all sanitary measures within view were adopted! It will look impartial and be popular at the same time."² Of the hazards and horrors of the inquiry he gives a glimpse in a letter to the Registrar-General. "My vacation has been absorbed in visiting with Mr. Smith and Dr. Playfair the worst parts of some of the worst towns. Dr. Playfair has been knocked up by it and has been seriously ill. Mr. Smith has had a little dysentery; Sir Henry de la Beche was obliged at Bristol to stand up at the end of alleys and vomit while Dr. Playfair was investigating overflowing privies. Sir Henry was obliged to give it up. . . ."³ Usually, however, Chadwick remained in London, examining witnesses at Gwydyr House, testing street sweeping machines and jets d'eau, collecting specimens of earthenware pipes from Glasgow and Zurich to compare with the products of the Southwark potters, and arranging experiments to determine the engineering formulæ for the construction of scientific water and drainage systems. Over the reports of the Commissioners and other expert correspondents he exercised a watchful censorship, for error crept in by the most unlikely ways. A paper on French cemeteries by W. E. Hickson, the editor of the *Westminster*, was quietly discarded after Chadwick had objected to its excessive praise of French municipalities.⁴ When the great Robert Stephenson, "who is recognised as the real inventor of the locomotive engine brought forward by his father," submitted a report on water supply, Chadwick condemned it at once for its shocking ignorance of correct principles, and prevailed upon the Commissioners to reject it unanimously.⁵

To Chadwick's immense relief ("the continued labour of

¹ E. C. to Sir Henry de la Beche, 22 December 1843.

² E. C. to Dr. Laycock, 6 June 1844.

³ E. C. to Major Graham, 7 December 1843.

⁴ E. C. to J. H. Burton, 3 February 1844.

⁵ E. C. to Lord Morpeth, 18 September 1848.

examining witnesses was becoming very severe"¹) the First Report of the Commission was published in July 1844. He had written two-thirds of it, he told his friends.² However, the octavo volumes looked very well, and he felt satisfied that his trouble with them had been well expended.³ The Government apparently considered that this satisfaction should be his only reward, for he received no acknowledgment of his services and no recompense for the additional labour which had lengthened his hours of work from six to sixteen. If he had employed the same time in writing for reviews, he complained later to the Duke of Buccleuch, as Cabinet Ministers had been known to do while in office, he would have made more money.⁴

The First Report was brief, merely outlining in general terms the conclusions suggested by the evidence, and apart from a few striking passages about the state of drainage and water supply in the provincial towns (passages which have served historians well ever since) it made little impact upon the public consciousness. It gained hardly a notice in the newspapers, their columns being filled with the case of a boy who had been flogged by an Irish magistrate.⁵ The jolt given by the *Sanitary Report* to the conscience of the ruling classes was not to be easily repeated.

There was a strong impression, voiced by Normanby in the Lords, that nothing new had been brought out by the inquiry. It was true, Chadwick agreed, that the medical witnesses did little more than corroborate the earlier testimony;⁶ but the evidence on water supply, the key to all sanitary improvements, he believed—with some justice—would revolutionise that branch of engineering, and he counted his examination of Thomas Hawksley, the engineer of the Trent Water Works, as the most important he had ever taken.⁷ Many of the conclusions on technical and administrative matters had in fact been glanced at in the *Sanitary Report*; but these were precisely the parts of the report which had made least

¹ E. C. to Thomas Hawksley, 9 July 1844.

² E. C. to J. H. Burton, 31 July 1844; to Macvey Napier, 12 October 1844 (Macvey Napier Papers, B.M. Add. MSS., 34, 624, f. 629).

³ E. C. to Thomas Hawksley, 1 September 1844.

⁴ E. C. to Duke of Buccleuch, 17 and 19 December 1845.

⁵ E. C. to Lord Normanby, 17 August 1844.

⁶ E. C. to Dr. Southwood Smith, 22 July 1844.

⁷ E. C. to Woollett Wilmot, 7 October 1844.

impression, and where repetition, reinforcement, and a closer discussion were most required. If the main strands of Chadwick's argument are disentangled from the mass of the evidence, it becomes clear that the foundations for reform had been laid more deeply and firmly, and that some of his propositions had advanced from the stage of suggestion to that of demonstration.

The first step had been to sweep away the complaints and denials of the ruffled Sewers Commissioners. They were answered out of their own mouths. In Richard Kelsey, surveyor to the City Commission, for example, Chadwick found a perfect spokesman for their ignorance and complacency.¹

Asked if he possessed a plan of his district, he replied triumphantly that he had; he admitted, however, that it did not show the levels, though he kept a private memorandum of this essential information. "Can you tell, on inspecting the map, which way the water falls in all the drains represented?" Chadwick asked him. "I could tell, because I know," was the reply, "but no stranger could tell."² He confessed indeed that the district might contain some sewers of which he possessed no record. "The maxim of the Commissioners," he declared, "is never to make any sewer so small as that a man cannot get into it easily";³ so that even for courts and alleys a sewer 3 ft. x 2 ft. 2 in., sometimes 4 ft. x 2 ft. 4 in., with brickwork 14 in. thick, was laid down. Sewers of this size, he admitted, presupposed accumulations, which were removed at a contract price of 6s. per yard, the brickwork of the sewer being torn open where no manholes existed. These brickwork caverns, rarely inspected and irregularly cleansed, had sometimes been put to strange uses. In one parish, Kelsey revealed, the beadle had been buried in a sewer. In another a sewer had been surreptitiously used as a burial-ground, exploration revealing two flat tombstones and six or seven coffins.⁴

¹ *First Report of Health of Towns Commission*, vol. ii, pp. 203-31.

² *Ibid.*, vol. ii, p. 208.

³ *Ibid.*, vol. ii, p. 211.

⁴ But these immense sewers might have better uses, as Chadwick pointed out to Colonel Rowan of Scotland Yard in April 1848, when the loyal middle class were preparing to deal with a Chartist attempt to seize the metropolis. The Chartists might throw up barricades in the streets, from which it would be difficult to dislodge them. But, suggested Chadwick, a band of two or three hundred sewer men might be sworn in as special constables, to creep unsuspected along the sewers and emerge at manholes in the rear of the startled revolutionaries. (E. C. to Col. Rowan, 8 April 1848.) Three months later one

House drains, he considered, should not be less than 15 in. in diameter; for a small house they should be even bigger, as they were more likely to be blocked. Asked his opinion about the possibility of replacing the existing brick drains with pipes four or five inches in diameter, he replied scornfully, "half a brick would stop it"; "in poor houses you can never keep them free from coals, cinders, bottles, broken pots, and all kinds of old rubbish"—and if a grating were inserted to prevent the entry of such dejecta, it would of course be wrenched away by the feckless tenants.¹ Main streets in the City were cleansed every day, all others two or three times a week; courts and alleys "ought to be cleansed" twice a week, but Kelsey was not certain that this was done. He could only account for the filthy places in his district, he said, by the filthiness of the people.²

It was against this background of ignorance and crude empiricism that Chadwick brought forward his technical experts, Dr. Dyce Guthrie, S. O. Foden the architect, and John Roe, the surveyor of the Holborn and Finsbury Commission,³ to show that brick sewers costing £2 10s. a yard might be replaced by terra cotta tubes at one-third the cost or by pipes of common clay which were manufactured in Glasgow for no more than 2s. a yard. To put in a cesspool cost about £5, and to clean it £1 a year; yet for £4 a house could be fitted with water-closet, sink, water-pipe and improved house-drains. For an addition of 2½d. a week to their rent the working classes could enjoy the combined benefits of a water-closet and a constant supply of water.

Without a constant supply of water to every house, however, it was useless to think of water-closets and self-cleansing sewers. Could such a constant supply be provided? To Chadwick at Gwydyr House came the engineers of the London water companies to explode this fantastic hypothesis. Thomas Wicksteed, engineer of the East London Waterworks Company,⁴ was con-

of the men engaged on the subterranean survey then being conducted by the Metropolitan Sewers Commission was found to be a confederate in a plot to blow up Parliament and the Government offices, the explosive to be laid in the sewers, which were five feet high and offered easy means of access to the conspirators. (E. C. to Sir Henry de la Beche, 29 July 1848.)

¹ *First Report of Health of Towns Commission*, vol. ii, p. 223. ² *Ibid.*, p. 220.

³ *Ibid.*, vol. ii, pp. 241-63 (Dyce Guthrie); pp. 315-24 (Foden); pp. 154-180 (Roe).

⁴ *Ibid.*, vol. ii, pp. 11-27.

vinced that it was theoretically impossible to keep water at pressure in all the mains and service pipes at the same time, and that the Company's method of intermittent supplies on alternate days was therefore the only practicable one. Moreover, "if he [the landlord] was to put a separate supply to those houses by a lead pipe, the lead pipe would be there in the evening, but it would be gone in the morning."¹ He advised therefore that the poor should continue to draw their supplies from cast-iron stand-cocks, which offered less temptation—and of which, in his district, there was one to every hundred houses. Wicksteed's company obtained its water from the River Lea; the supplies were not filtered, but the more obvious impurities were removed by passing the water through settling reservoirs; and in fourteen years, he claimed, there had not been six complaints of bad water from the company's 50,000 tenants. The Southwark Water Company, according to its engineer, Joseph Quick,² supplied 18,000 houses, 2,000 of the lower-class tenements being served by 250 stand-cocks. In this district 5,000 houses had no supply at all, and their 30,000 inhabitants depended on pumps and such rain-water as they could catch. Water-carriers were still to be seen in Clapham and Rotherhithe, charging a halfpenny for two pails, though the company's pipes ran close to the houses; two objections were raised by the landlords to laying on a supply for their tenants: the lack of drains to carry away the waste, and the immediate outlay required for the service pipes.

To controvert the evidence of the London engineers Chadwick brought forward Thomas Hawksley of Nottingham, who had designed and constructed the Trent Water Works fourteen years before.³ This company supplied 8,000 houses in Nottingham, with 35,000 inhabitants, and charged no more than a penny a week for an unlimited supply to working-class tenements. Hawksley was as firm as Chadwick that such a service should be commercially remunerative, not a form of charity, and he revealed that, despite its low charges, his company paid five per cent on its capital-outlay, and its £50 shares sold at £70 to £73. He rejected with scorn the London engineers' thesis that larger mains

¹ *First Report of Health of Towns Commission*, vol. ii, p. 23.

² *Ibid.*, vol. ii, pp. 114-36.

³ *Ibid.*, vol. ii, pp. 27-97.

would be required for a constant supply, pointing out that in practice he had been using smaller mains and service pipes than was customary. Lead service pipes in his experience were rarely stolen, the task of cutting them being highly inconvenient when they were filled with water at high pressure. Tenants, who had previously been obliged to pay water-carriers a farthing a bucket, cheerfully paid the extra penny a week on their rent for an unlimited and constant supply. Hawksley foresaw a Utopian future—streets cleansed by jets; constant water supply, water-closets, and glazed earthenware house-drains in each house at a total cost of less than £5; warm baths in public bath-houses at 3d. a head; even “baths introduced into the houses of labouring men for the use of themselves and families.”¹

Chadwick had an instinct for selecting the right experience and the right advisers, and for combining the partial solutions of the practical men into a working whole which was at once logical in its theoretical foundations and technically sound in its practical application. He perceived at once that Hawksley's evidence was complementary to that of the Holborn surveyor, John Roe. Hawksley showed the way to cheap domestic supplies of water, as Roe had revealed the possibility of cheap and efficient removal of domestic waste and excreta. If the two were combined in a unified system, the solution of the main problems of urban sanitation was in sight.

There remained the question of the town refuse. The position as described by William Thorn, a member of the oldest firm of scavenging contractors in London, was far from encouraging.² Two years before a contractor had given the parish authorities in Marylebone £1,850 for the refuse, but the bottom had since dropped out of the market, and in 1844 the parish had been obliged to pay the contractor for his services. Some portions of the refuse paid for the cost of removal; ashes and breeze were in demand for brick-making, “hard core” was used on the roads, rags were wanted for paper-making, horse-dung and cow-dung were sent out by barge as far as eighty or ninety miles from the capital. But night-soil was almost a complete loss. Some was baked and exported to the West Indies; the remainder accumu-

¹ *First Report of Health of Towns Commission*, vol. ii, p. 31.

² *Ibid.*, vol. ii, pp. 369-82.

lated in laystalls, for which there was increasing difficulty in finding suitable sites.

Now it was precisely in the night-soil, which in London was the least valued portion of the refuse, that Chadwick saw the possibilities of the greatest profits. Captain Vetch¹, when consulted about the improvement of Leeds, had assured the Town Council that, if his plans were carried out, in ten years the sale of the sewage to local farmers would bring in £10,000 a year. Examples were numerous of the profitable utilisation of sewage as manure. At Ashburton liquid sewage had been applied to the land for the last forty years. Three hundred acres near Holyrood Castle were irrigated by the Foul Burn, into which one-third of the sinks, drains, and privies of Edinburgh emptied, and the annual value of the land, which produced four or five crops a year, was estimated to be £15,000 or £20,000. Abroad, irrigation by liquid sewage was employed by the farmers of New Spain, Barbary, Andalusia, and Milan. Reflecting on these examples, Chadwick asked himself, if a water company, giving the excellent service Hawksley described at so moderate a cost, could return a profit of five per cent, what might be expected of an enterprise which undertook not only the water supply but also the removal of the town refuse, and drew additional profit from the sale of sewage manure to the neighbouring agriculturists? In that calculation was born the delusive project of his Towns Improvement Company.²

In the minutes of evidence of the First Report Chadwick, selecting his witnesses and pointing his questions with a barrister's skill, thus confronted the defenders of the old order with the authoritative denials of men who had themselves originated improvements or had observed them in action. Ready to hand, he proved, in the successful experience of Hawksley, Roe, Foden, Vetch, Dean, were the makings of a scientific system of municipal engineering, in which the three aspects of urban sanitation, drainage, water supply, and sewage disposal, might be integrated into an organic whole.

It was intended that the Second Report should outline the Commissioners' proposals for future legislation. On 13 December 1844 Chadwick laid before the Duke of Buccleuch the draft

¹ *First Report of Health of Towns Commission*, vol. ii, pp. 432-43.

² See below, pp. 118-22.

of a Public Health Bill, together with a lengthy memorandum in which he explained and defended his main recommendations.¹ It is in these papers, and not in the reports of the Commission nor in the Act of 1848, that Chadwick's views on public health policy are most truly reflected; and they call, therefore, for consideration in some detail.

Was not the best solution, as Lord Normanby urged, to confer enabling powers upon the existing local authorities? There was one short and conclusive answer to this proposal: the existing local authorities had in general mismanaged all such powers as they did possess. Of the fifty towns examined, the Commissioners were unanimously of the opinion "that in scarcely one place can the drainage or sewerage be pronounced to be complete and good, while in 7 it is indifferent, and in 42 decidedly bad as regards the districts inhabited by the poorer classes";² as for the supply of water, "only in six instances could the arrangements and the supplies be deemed in any comprehensive sense good; while in 13 they appear to be indifferent, and in 31 so deficient as to be pronounced bad, and, so far as yet examined, frequently inferior in purity."³ There were four good reasons, in Chadwick's view, why municipalities were unfitted for the task of administering public health measures. In the first place, their boundaries usually did not take in the suburbs, erected subsequent to the granting of their charters; yet it was in the suburbs that the best outfalls for the town drainage were commonly to be found. Secondly, the structure of municipal government was permeated with influences opposed to sanitary reform, the interest-begotten hostility of small property owners, the jealousies and suspicions generated by party feuds, the enveloping atmosphere of patronage and jobbery. Thirdly, the municipalities were too ignorant to understand the engineering problems involved, as was proved by the defective provisions of all the Improvement Acts promoted by

¹ "Health of Towns Improvements. Proposed outline clauses of a Bill for the issue of amended Commissions of Sewers, Drainage, Water Supply, Paving, and Health of Towns Improvements," MS., 13 December 1844.

"Health of Towns Improvements. Draft Report of Observations and Recommendations on a Bill for the Drainage, Better Supply of Water, and Improvement by other means of Health of Towns," MS., 13 December 1844.

² A quotation from the *First Report*, v. i. i p. xv.

³ *Ibid.*, vol. i, p. xviii.

them in recent years.¹ Finally, there was scarcely a town of any size where the main public health functions were not shared out between clashing and uncoordinated authorities, a trading company supplying the water, the Corporation draining the borough, a body of Commissioners under a Local Act performing the same service for the suburbs, a road trust doing the cleansing and paving.²

The lesson was clear. For geological and engineering reasons, special districts for drainage and towns improvement must be established. For economic, political, and social reasons, those special districts must have a special administrative authority, comprehending in its scope the whole of the public works in the area. Chadwick proposed in fact to refurbish the ancient machinery of Crown-appointed Commissions of Sewers, as he had earlier suggested in the *Sanitary Report*, giving them wider powers and a new direction, and putting them under the tutelage of a department of the central Government, which would guard against improper appointments and ensure the efficient execution of their duties.

The composition and functions of the central department Chadwick described as he explained his arrangements for financing the vast new schemes of local works. He proposed to lay the charge for improvements upon the parties immediately benefited, the occupiers, in proportion to their terms of enjoyment; and to ensure that they would pay no more than their fair share for the benefit they received, he suggested that the charge, principal and interest, should be spread over a period of thirty years. This recommendation involved two further proposals—

¹ The Birkenhead Act (6 & 7 Vict., c. 13 Local), for example, "from the habit of not looking beyond the immediate local experience," recognised all the old evils of working class housing, blind alleys, cellar dwellings, cesspools, etc. Chadwick had written severely to one of its promoters: "I shall feel it my duty to ask the attention of the Commissioners . . . to the regulations set forth in the sanitary report on Birkenhead—in proof of the necessity of some extraneous security other than the builders' own interests, for the protection (it might be said of those very interests) of the health of the population: in other words to ensure that the experience already obtained, as to the causes of disease and the practical means of prevention, shall be properly consulted and applied." (E. C. to John Laird, 22 October 1844.)

² See, for example, Chadwick's analysis of the Liverpool Local Acts, *Second Report*, vol. i, p. 42, footnote: "Table showing want of consolidation and inconsistent powers of various authorities under Local Acts in Liverpool."

that local authorities should be empowered, with the consent of the central Government, to raise loans on the security of the rates, and to execute the domestic works under contract, with all the consequent economies of large-scale business; and, secondly, that there should be a compulsory rate for drainage purposes, its collection being consolidated with that of the water rates and other local charges.

In this financial machinery of public loans and compulsory rates Chadwick saw yet another argument against the grant of self-acting powers to local authorities. For it was not only the interests of the present tenants which must be considered, but also the interests of those who would be occupying the premises in thirty years' time; and there must be some security that the works were of a quality to last so long and be of benefit to those reversioners and absent parties in proportion to the share of the cost which would fall upon them. Now this was a responsibility which the local authorities could not be trusted to shoulder alone. It was only too likely that they would fall under the influence of building speculators, who would push them into extravagant jobs, the cost being passed on to future occupiers.

Here then was the main ground upon which Chadwick based the supervisory powers of the central department. Before granting to the local authority the privilege of distributing charges, the central department must satisfy itself, on behalf of the reversioners, that the works had been efficiently planned and executed. The procedure should be—first, a survey of the district conducted by the Board of Ordnance; then an examination by a competent engineer, who would produce plans, together with estimates of the outlay involved; and finally the preparation of a report, to be distributed in the locality. After this preliminary inquiry, which would condition local opinion for the reception of the coming changes, the case would come for consideration by the central department. What should be the character of that department? It should be, thought Chadwick, a judicial committee of the Privy Council; for essentially the functions it was called upon to perform were judicial in their nature—"the legal distribution of the charges, and the protection of reversioners and the pockets of the absent, the determination of the principles, and the settlement of the amounts of compensation." But the judicial committee should

act upon the advice of "one responsible properly qualified legal officer." It was this man who would occupy the key position at the centre. He would direct the local inquiries and prepare a report upon their findings. The commissions, which the Privy Council would issue to constitute the new public health authorities, would be addressed to persons nominated on his recommendation.

Such a procedure offered many advantages. It would present a small target to the anti-centralisation party. There would be the minimum of new machinery at the centre. Moreover, no wholesale powers of initiation were to be conferred on the central Government. The Privy Council might direct an inquiry to be made on receipt of a petition from the locality; but failing such an appeal, they should take action only if the death rate from zymotic diseases exceeded a certain fixed proportion. Many towns would thus be able to maintain their freedom from interference by Whitehall on the ground that their bad drains and contaminated water did not kill sufficient numbers to justify the intervention of the Privy Council. A further advantage was its great cheapness. Liverpool had spent £2,600 not long before in obtaining Local Acts for water supply and towns improvement. Under the arrangement Chadwick proposed, the cost would have probably not been more than £200 or £300, to cover the expenses of a competent engineer while he examined the town and prepared a plan of works; and such a plan would have saved the Corporation from wasting £50,000 on an erroneous and inefficient scheme. Finally, it was a flexible procedure, by which "the plaster may (to use a homely illustration) be cut and fitted to the sore place to which it is applied." The preliminary inquiry would enable the public health machinery to be adapted to the needs and resources of each individual locality, whether it were a village or a city, a town in Scotland or in Ireland, or for that matter a town in the colonies.

Though Town Councils found no place in Chadwick's administrative scheme, he was less severe on water companies. Reproved for the restrictive practices and wasteful competition of their unregenerate past, they might yet be integrated into the framework of local government. In the past proprietary rights in town water supplies had been inadvertently conceded by Parlia-

ment to private and irresponsible water companies; those rights should now be resumed, and converted into an express public trust. The motive of private profit and the energy of private enterprise, thought Chadwick, could be harnessed to the public interest by contracts between the local Commission and the local water company, which would protect consumers against commercial rapacity and guarantee universal supplies at constant pressure, while giving the public at the same time the benefit of the superior efficiency of capitalist management. Companies would be prepared to construct and maintain waterworks, he believed, for a guaranteed profit of 6 per cent—that is, $1\frac{1}{2}$ to 2 per cent above the common rate of interest on money borrowed. “Not 6 per cent additional interest, not even 10 per cent additional interest, would fairly insure the ratepayers for the risks of an additional expenditure by any probable local body, even with the proposed securities of a previous examination of their plans of works.”

It has been necessary to consider at some length this memorandum by Chadwick, since it reveals strikingly the strength and weakness of his views on public health policy, and indicates the main points around which the sanitary debate was to revolve for the next few years. What was to be the nature of the executive body in the locality and of the controlling body at the centre? These were the two main administrative questions to be settled; and to both questions, in his advice to Buccleuch, Chadwick gave the wrong answers. His suspicion of local representative bodies issued in the recommendation that public health measures should not be entrusted to the inefficient and party-ridden municipalities, but should devolve upon a body of *ad hoc* commissioners, appointed by the Crown on the basis of their fitness for the work. But who is “the Crown” in this context? A committee of the Privy Council—who are to act on the advice of a single responsible legal officer. There is no doubt whom Chadwick had in mind for the post, for who but Edwin Chadwick possessed the necessary knowledge, experience, and energy to grapple with the problems presented by this vast new field of administration? The whole broad province of sanitary engineering and sanitary legislation Chadwick had now taken for his own, and, surveying Whitehall and Downing Street, he could see no one else—certainly no

Minister of the Crown—to whom he was prepared to lease his proprietary rights. It should be noted that at no time did Chadwick press for a Government Board on the lines of the Poor Law Commission. A few days before he presented his memorandum he had told Buccleuch, “Colonel Colby [of the Board of Ordnance] who has had much plague with Boards, ventures as an axiom that for doing business almost the worst individual appointment is better than the best possible Board. I do not go so far but having been the scapegoat of proceedings against which I have remonstrated shall have one day some large revelations on Board management.”¹ His model was not the “Three Kings,” with their unhappy associations of divided authority and frustrated effort, but Kay-Shuttleworth’s position of quiet power as secretary to a Privy Council Committee.

It appears strange that a man who had helped Bentham to write the *Constitutional Code* should not have seen that only by the establishment of a separate State department under a Minister of Health could sanitary measures claim the attention and attain the prestige as objects of government that they deserved. Chadwick had not learned—and never would learn—the lesson of the Poor Law Commission, and he continued to deplore the system which entrusted the direction of administration to the temporary masters of a shifting Parliamentary majority. It must be recognised, however, that in 1845, in the existing state of Government opinion on the subject, the case was strong for any arrangement which would afford Chadwick the chance to guide and shape public health policy. At the Privy Council office he would be under the protecting wing of Lord Lansdowne, a good friend to himself and to the sanitary cause. There was the further advantage that the arrangement was “small, simple, tentative, and easily altered and extended, as circumstances might require, and . . . comparatively inexpensive.” The department would be small at first, but could be made as big as the task it had to handle; the single appointment of counsel to the Privy Council could be made as big as the man who filled it. There was much to be said for it as an interim solution for the experimental period when what was primarily needed was a ready adaptability, a capacity for the rapid assimilation of new ideas and new functions; when the new

¹ E. C. to Duke of Buccleuch, 2-5 December 1844.

department must win its ground against the vigilant hostility of the interested minorities who hated its intervention, and the larger body of critics who opposed on principle any extension of Government activity.

The Royal Commission on the Health of Towns was a continuation of the inquest on municipal government opened in 1835; and Chadwick's team of engineers and doctors probed more deeply than the bright young lawyers who had drawn up the indictment of the closed corporation. In Chadwick's view the transference of municipal authority from a Tory oligarchy to a ratepaying democracy of shopkeepers and Dissenters had not made the Town Council in any respect a more fit instrument for local government. The investigation had presented him with only too many examples of Town Councils sitting contentedly amidst their filth, exhibiting neither the desire nor the ability to introduce improvements. The municipalities were cramped in their areas, destitute of the most important functions of government or sharing them with intrusive bodies of *ad hoc* commissioners, torn by party strife and dominated by the petty interests of landlords and shopkeepers; so handicapped they faced the problems of a society passing through an industrial revolution with the inhibitions of the ratepayer and the confident ignorance of the "practical" man of business. That was the picture as Chadwick saw it. And, indeed, there was little in the eighteen-forties to suggest how far the municipalities were destined to become the chosen instrument of the modern State for realising the good life for its citizens.

On one question, therefore, the memorandum reveals that Chadwick had changed his mind since 1842. In the *Sanitary Report* he had spoken with approval of public management, and had urged that the example of the Manchester Gas Works might be profitably followed in the supply of water. Now, however, though he insisted vigorously that the unchecked individualism of early buccaneering capitalism must cease, he was convinced that only the motive of private gain could ensure efficient and economic service, and that, indeed, "the evidence almost goes so far as to establish this that the worst company would almost be better than the best corporate municipality."¹ This was a very crude overstatement of his position, less an induction from the evidence

¹ E. C. to J. Hodson, 10 April 1845.

taken before the Commission than an expression of Chadwick's roseate hopes for his Towns Improvement Company. The testimony of his witnesses was, in fact, more balanced on this point than the conclusions he had drawn from them. Thomas Wroe, manager of the Manchester Gas Works, had shown that they supplied 1,000 cubic feet for less than 6s., the charge in other towns, where the supply was in the hands of companies, being usually 8s.; and the Gas Works had already returned to the town a profit of £370,000, which had been spent on the erection of a Town Hall and other improvements.¹ On the other hand, however, Thomas Hawksley, on whose evidence Chadwick leaned so heavily, threw his influence on the side of private enterprise; and the brilliant success of Hawksley's company in Nottingham outshone the few examples of publicly managed water supplies which Chadwick discovered in operation at Huddersfield, Brecon, Halifax, Hull, and Bath.² He was quite convinced, he told Buccleuch, of the "general utter incompetency of the municipal corporations in England to carry out such works." Hull Corporation, for example, had spent £55,000 in giving an intermittent supply to 8,000 houses; fourteen years before, when the price of iron was higher, it had cost the Nottingham Company only £32,000 to lay on a constant supply to the same number of houses; and while the Nottingham Company made a satisfactory profit by charging the lower class of tenements a penny a week, the Hull Corporation was obliged to charge double this sum. The difference was not due to jobbery on the part of the Corporation: "it is only such a result as must always be expected where people have not an interest in comparing pecuniary results with pecuniary expenditure in the erection and management of works."³

There is much to criticise in the form in which Chadwick cast his local and central machinery; but in his conception of the proper relationship between the centre and the localities there is much besides that is admirable. In the preliminary inquiry—the prototype of the modern procedure of local inquiry by

¹ *First Report*, vol. ii, p. 343.

² At Bath, for example, which Chadwick had previously looked upon as a favourable instance of public management, he found that the Corporation charged 10s. per annum for 40 gallons a day, as compared with the Nottingham charge of 4s. 4d. (*Second Report*, vol. i, p. 88.)

³ E. C. to Duke of Buccleuch, 23 May 1845.

inspectors of the Ministry of Health and the Ministry of Town and Country Planning—he had devised an adaptable instrument of infinite flexibility, which, while paying due respect to local idiosyncrasies, would bring the local authority firmly into line with the policy of the central department. It was to prove its value a few years later at the General Board of Health.

The proposal to distribute the cost of new works over a period coincident with the benefit derived from them wears so simple and commonsense an air that its importance may easily be overlooked. In Chadwick's hands it becomes an argument for the most powerful weapon wielded by the General Board of Health: the scrutiny by the central department of all local improvement schemes, and the loans by which they were to be financed. It has, however, a further significance, which was presently to be exploited to the full by the propaganda of the Health of Towns Association. The bitterest objections to sanitary reform were raised by property owners who feared that drains and water meant heavy additional burdens upon themselves. Thomas Cubitt, the building contractor, spoke for this class when he declared that "the public" were not prepared to go to the extent of putting a water-closet in every house: "I think that if people were obliged to put them, it would be considered a very severe tax upon them."¹ Chadwick's reply was to demonstrate that, if the charge were spread over thirty years, the cost of fitting new house-drains, closets, and water pipes would dwindle to a weekly payment of 1½d., which was within the means of even the poorest tenants, and was considerably cheaper than the cost of the existing privies, cesspools and stand-cocks. It was good arithmetic and good economics; but it fought a slow battle with the "landlord fallacy" that stinks and damp formed part of the tenant's risk, and the equally powerful ratepayers' fallacy that fever nests were cheaper than public works.

How the Duke of Buccleuch received Chadwick's draft Bill and the accompanying memorandum there is no evidence, but Chadwick records that throughout December and January he was kept busy "endeavouring to stop mischief."² It is clear, however, that the Commissioners were not willing to act up to the

¹ *First Report of Health of Towns Commission*, vol. ii, p. 265.

² E. C. to T. Bamfield, 26 January 1845.

strength of the arguments he directed at them, and the thirty recommendations into which they expanded the general conclusions of the First Report departed in several important respects from the advice contained in the papers he had laid before Buccleuch. Nevertheless, "the main propositions are I expect secured," he told a friend, "but very slenderly supported by reasons."¹

"We therefore recommend," ran the first proposal, "that in all cases the local administrative body appointed for the purpose have the special charge and direction of all the works required for sanatory purposes, but that the Crown possess a general power of supervision."² Whether the "local administrative body appointed for the purpose" should be the Town Council or an *ad hoc* body established under royal commission, whether it should be elective or nominated by the Crown, were questions left open for further debate, and Chadwick's suggestion that the Privy Council should be indicated as the supervisory authority was equally rejected. For the next three years the nature of the local authority and of the controlling department at the centre was to be discussed in Parliament, with Chadwick working continually, in letters and memoranda and personal interviews, for his local Commission of Crown nominees, acting under the guidance of a judicial committee of Council. There was another significant omission. The Report recommended that, on appeal from the local authority or a certain number of the inhabitants, the Crown should direct an inquiry into the sanitary condition of any district, and should be empowered to enforce the execution of the law;³ but Chadwick's proposal that the inquiry should be conducted automatically on the evidence of the excessive mortality as shown in the Registrar-General's returns, contemplated the gift of more aggressive powers to the central Government than the Commission were prepared to advise. Similarly they found no place for the flexible, powerful instrument of the local inquiry. A plan and survey must precede any scheme for works of town drainage; the Crown should have power to define and enlarge from time to time the area for drainage included within the jurisdiction of the local authority—these principles were recognised, as they must be in the face of the overwhelming technical evidence. But the local

¹ E. C. to T. Bamfield, 26 January 1845.

² *Second Report*, vol. i, p. 25.

³ *Ibid.*, vol. i, p. 39.

inquiry by a Government inspector, with the scope and intention that Chadwick would have given it, reached beyond this, fumbling towards a conscious perception of social purpose which a Royal Commission of 1845 could not but regard as unsafe. Even more disappointing to Chadwick's hopes was the casual mention of the Officer of Health. Almost as an afterthought the twenty-ninth recommendation proposed that the local administrative body should have the power to appoint, subject to the approval of the Crown, a properly qualified medical officer to inspect and report upon the sanitary condition of the district.¹ A few lines dealt with the functions of an official to whose importance Chadwick had devoted eighteen months of agitation and thousands of words of argument.

On the other main points he carried the Commission with him. The local authority should have wider powers in sanitary matters than had hitherto been granted either under Local Acts or by the Statute of Sewers. It should be responsible for the paving of all streets, courts, and alleys, and for the construction of house drains as well as the sewers. It should be invested with the rights to all the dust, ashes, and street refuse. It should have powers, subject to approval, to buy out mill-owners and others whose property rights were an obstruction to proper drainage, and to purchase property for the purpose of opening thoroughfares, improving ventilation, and increasing the general convenience of traffic.²

But of the greatest importance were the resolutions on water supply. The Commission recommended that it be obligatory on the local administrative body to procure a supply of water in sufficient quantity not only for the domestic needs of the inhabitants, but for cleansing the streets, scouring the sewers and drains, and extinguishing fires. Where a company controlled the supply it should be required to comply with the demands of the local authority on equitable terms; and the latter should be empowered to purchase the waterworks, with the approval of the Crown, if the proprietors were willing to dispose of them. Competition between water companies should be discouraged as far as practicable. The three recommendations which followed made it clear that the service should be extended to all dwelling-houses, and that the supply in all cases should be constant, and at as high a

¹ *Second Report*, vol. i, p. 122.

² *Ibid.*, pp. 52, 65; 72; 44, 107.

pressure as circumstances permitted. Unqualified approval was given to Chadwick's proposal that the waterworks should be executed, maintained, and kept in good repair by public companies, as lessees or contractors for terms of years, with liberty of redemption by the public upon conditions previously settled. In phrases which echoed his memorandum to Buccleuch the Report declared that companies would consider a return of six per cent an adequate inducement, this being 1 to 1½ per cent above the usual market rate for such investments. This would be cheap "as compared with the risk of mismanagement by local boards, composed of persons having no professional skill, and liable to be misled as to the materials and magnitude of the proposed works, as well as to the numbers of officers requisite to maintain them. It might be difficult to ensure that a local body should be so constituted as to give the same constant attention to economy in the expenditure of other people's money that contractors would do in the expenditure and management of their own."¹

The financial machinery outlined by the Commission was also substantially that proposed by Chadwick. Loans for constructing public works might be raised by the local administrative body on the security of the rates, the approval of the Crown being first obtained. The expense of the works would then be charged upon the properties benefited, in the form of a special rate upon the occupiers, the whole sum with interest being recovered by annual instalments within a certain number of years.²

With the publication of the Reports of the Health of Towns Commission, the second phase of the public health movement was concluded. The first phase, to expose the evil, had been the primary task of the *Sanitary Report*. That report had also contained a sketch of Chadwick's ideas on the course legislation should take. But it was the revelations, not the recommendations, of the *Sanitary Report*, which had attracted attention. Now the technical and administrative possibilities had been explored by an authoritative body of Commissioners, whose advice came with more weight than that of a single civil servant of equivocal reputation. The third phase, to translate those recommendations into legislation, was now opened.

¹ *Second Report*, vol. i, pp. 95, 99-104.

² *Ibid.*, pp. 60-1.

CHAPTER V

SANITARY PROFITS AND PROPAGANDA

THROUGHOUT these busy months of 1843 and 1844, while Chadwick had borne at Gwydyr House the main burden of the Health of Towns investigation, two further anxieties had weighed upon him. The first was the behaviour of the Marquis of Normanby. As Lord Lieutenant in Ireland Normanby had antagonised the Anglo-Irish community by his friendship with Catholics and his clemency in political cases, thus revealing that beneath a somewhat flippant and flamboyant exterior he concealed an unexpected strength of principle. As Home Secretary he had been converted to the cause of sanitary reform in the backstreets of Whitechapel; with the best of intentions he had sponsored a set of remedial measures which Chadwick, from a fuller knowledge, could only judge to be incomplete and ill-designed and now from the opposition benches he directed a jealous eye upon Sir James Graham's leisurely handling of public health questions. At the beginning of the 1844 session Lord Normanby rose to inquire what the Tories had done with his three sanitary Bills. When the Whig Government fell, Graham had promised to take the Drainage Bill under his own special care; nothing more had been heard of it. After an unaccountable delay of twelve months, Graham had appointed a Commission of Inquiry, though Chadwick's Report of 1842 proved the necessity for immediate legislation, and "the result of its perusal must be to convince any one that more information was not what was required upon the subject." The remedies were simple enough. "Centralisation" was not necessary; it would have been sufficient, as in his own Bills, to confer more powers upon existing local authorities.¹ In May, Normanby resumed his attack, presenting a petition from a public meeting of 3,000 Edinburgh

¹ *Hansard*, vol. lxxii, pp. 220-8, 5 February 1844.

working-men, the first petition on such a subject that had ever been received from the lower classes. Four years had passed since the need for a general measure had been considered, said Normanby, two years since the *Sanitary Report* had appeared, and another year was now elapsing without anything being done.¹

Chadwick resented the imputation that the months devoted to maturing his engineering and administrative plans for the Health of Towns Commission constituted a quite unjustified delay. To avoid superficial legislation, time was well spent in designing measures, and, what was equally important, in cultivating opinion for their reception. As he told R. A. Slaney, who shared Normanby's impatience, "the cause is progressing, the evidence is telling, and in due time a fullness of opinion will be manifested to carry the measures which can only be carried with the strength of a strong opinion. What I am most afraid of is separate and ineffectual measures."² In the virtuous indignation of a Minister out of office at the tardiness of his rivals in power, Chadwick saw a further danger—that sanitary measures might be dragged into the arena of party politics, where they would lose the cool detachment of a scientific investigation in the heated atmosphere of a faction fight; and where, moreover, they were likely to escape from his control. Thus he wrote to James Simpson, who at his suggestion had drawn up the petition from the Edinburgh workers which Normanby presented to the Lords: "I should have deprecated the giving the proposed petition to Lord Normanby or doing anything which would give the proceeding a party complexion as I fear that will do. The fact is Lord Normanby's measures against which Dr. Southwood Smith and others were strongly remonstrant would, if they could have been carried out, have spread bad drains throughout the country at an enormous expense, and not have mitigated and in all probability have aggravated the evils intended to be remedied. He stopped all proceedings in the getting up of local sanitary reports and under his influence the sanitary report itself was stopped and never probably would have appeared but for his removal from power. Now that it has appeared he is very complimentary. Still, however, the objection to such a presentation is its party complexion.

¹ *Hansard*, vol. lxxiv, pp. 541-5, 2 May 1844.

² E. C. to R. A. Slaney, 23 November 1844.

Why could not Lord Dunfermline who may be said to be the natural representative of Edinburgh attend and present the petition?"¹

In a long and effective speech Normanby closed his 1844 campaign on 26 July with an address to the Crown, hoping that in the coming session the specific attention of Parliament would be called to the sanitary question. In the past few days he had revisited the eastern districts of London, and had come away with the impression that no such misery existed in any other civilised country. He warned the House that there was danger in further delay; "the sick bed is the place in which there is most time to brood over neglect, or to feel gratitude for sympathy."² The Duke of Buccleuch, armed with a memorandum from Chadwick,³ had no difficulty in demonstrating that when they were in office the Whigs had been as dilatory as the Tories, and he suggested that a large part of Normanby's enthusiasm for sanitary reform sprang from a desire to score off the Government.

Chadwick's second great anxiety at this period was the apathy of the public at large. "I am crying out Pestilence! and for the relief of the masses," he wrote to Thomas Carlyle, "but can get no one to hear of means which will affect the pockets of small owners in small corporations who have votes for the election of members of parliament and who set up the cry of self-government, as against any regulations which may lead to immediate expenditure for putting in better condition the houses for which they exact exorbitant rents."⁴ In particular he was keenly disappointed with the reception of his Report on Interments. While he was writing it, feeling had risen to a pitch of healthy indignation; the Officer of Health, the central proposition, had been welcomed by all the clergy he had met; "and yet soon after the appearance of the report that which had previously been a storm, almost, of agitation subsided."⁵ In a stream of letters in December 1843 and January 1844 Chadwick had urged his friends—Dr. Holland in Manchester, Dr. Laycock in York, James Simpson in Edinburgh,

¹ E. C. to James Simpson, 25 April 1844.

² *Hansard*, vol. lxxvi, pp. 1460–80, 26 July 1844.

³ "Memoranda of answers to the imputations of blame in respect to alleged delay to adopt sanitary measures," MS., 13 July 1844.

⁴ E. C. to Thomas Carlyle, 20 June 1844.

⁵ E. C. to Dr. P. H. Holland, 3 August 1844.

Southwood Smith in London—to get petitions signed by the working-men in all large factories. If Scotland did not agitate, he warned his Scottish friends, Scotland would go without the Officer of Health, as it had gone without the Vaccination Acts;¹ while Dr. Laycock was exhorted to sound the alarm in the *Lancet* against the danger of leaving the cause of death to be verified by the present registrars instead of by a qualified medical practitioner.² "I can get petitions pretty smartly poured in from Lancashire," Lyon Playfair had promised, adding that Bury was about to send a memorial calling for Officers of Health, and he would see that Preston and Ashton did the same.³ But six months later Chadwick had to confess to Dr. Holland, "I have heard of two or three petitions, your own is the only one I have seen."⁴

"I must own my disgust at the carelessness and selfishness of our public men," he confided to a German economist. "An excess of selfishness or of what Bentham calls the 'self-regarding virtues' without any compensating power of the 'extra-regarding virtues' is perhaps characteristic of our people. It is, however, to this excess, to strong stomachs and appetites that our manufacturing and commercial energy is to be ascribed."⁵ The problem was that before the Government could be brought to act, hard-headed business men in the Commons—fully endowed with the "self-regarding virtues" and the self-satisfied possessors of those "strong stomachs and appetites"—had first to be convinced that they were not being stampeded into rash and expensive action by the exaggerations of cranks and sentimentalists. Gentlemen, walking round their mills or their estates, had spoken to sturdy workmen, who had lived half a century and raised a numerous progeny in districts which were now (surely extravagantly) described as "fever nests." They felt it was being overdone, this danger from stinks and the propinquity of filth. After all, many themselves lived in houses of fashionable but insanitary design, with cesspool odours rising dankly from the servants' basements, and crawling nameless things in the water. At the Westminster

¹ E. C. to J. H. Burton, 7 December 1843.

² E. C. to Dr. T. Laycock, 13 January 1844.

³ Lyon Playfair to E.C., 15 January 1844.

⁴ E. C. to Dr. P. H. Holland, 3 August 1844.

⁵ E. C. to T. Garnier, 19 September 1844.

School, where some educated their sons, cesspools were strategically sited on either side of the entrance to the dormitory. The drains beneath the very building in which they sat, deliberating the welfare of their humbler countrymen, were so bad that a daring surveyor, who had once ventured into them, had declared that it was a relief to get back into the public sewer. So, only too often, Chadwick's political friends listened to him and seemed impressed; they went away vowing that something must and should be done; but once they were beyond the range of that earnest and importunate eye, the warning lost its urgency, and the firm outlines of their resolve softened into polite generalities of goodwill. His keenest arguments were turned by the tough intertwined fibre of the opposition—the inertia of the localities, “the *laissez faire* of evil people,”¹ the indifference of Ministers, the ignorance and complacency of powerful men about the uncleanliness of the towns.

Hence, in May 1844, Chadwick wrote to Lord Ashley:

“There is certainly a very large class of questions affecting the condition of the labouring classes on which external aid will be of much service if it be powerful and not merely a small buzz that goes on unheeded. There are many small interests adverse to the condition of the labouring classes that might by such aid be usefully kept in check by the representations of a body that would be properly attended to if well directed. . . .

“Your Lordship has seen how frequently interested parties are seated at Boards of Guardians, who are ready to stop anything which may lead to expenditure for the proper repair of the dwellings of the labouring classes.

“Where measures of drainage are proposed, and the works carried out by Commissioners of Sewers are found to be defective a cry is raised nothing must be done for fear of offending the Commissioners, and the active Commissioners in several instances are found to be precisely the same sort of persons as those of whom you have heard as Guardians.

“When additional supplies of water are called for, for the salubrity and cleanliness of the dwellings of the working-class population one cry raised is ‘Oh the interests of the companies is too powerful to be touched.’

¹ E. C. to the Rev. Theobald Mathew, 26 April 1845.

“An associated voice should surely be raised on the other side.”¹

What was needed was some hearty and persistent campaigning, with lectures and pamphlets and letters to *The Times*, public meetings to pass resolutions, and deputations to the Home Secretary headed by noble well-wishers, to convince Ministers that, if only for their own peace of mind, something must be done. But a civil servant could hardly appear as the leader of a movement to bring the pressure of external opinion to bear upon Her Majesty's Government; and, even if he had not been disqualified by reason of his office, this was work for which he was constitutionally unfitted. When James Simpson, in an address to a meeting of Edinburgh workmen, told them that Edwin Chadwick had counselled the labouring classes to join in petitions to the authorities, he was annoyed at this indiscreet mention of his name in connection with a public agitation.² He preferred to exert his influence from the official anonymity of Somerset House. Chadwick, indeed, was no platform agitator. In private conversation he could use with effect his inexhaustible stores of information, his close argument, his intimacy with detail, the authority of his personal knowledge which caused men to listen to him with respect. But a public speaker required other qualities, qualities which, as his unsuccessful Parliamentary candidatures in later life showed conclusively, Chadwick conspicuously lacked. His public utterances were lame and dull, tied down to notes, bristling with statistical minutiae, and sounding like extracts from one of his own blue-books.

So the formation of a Health of Towns Association was left to other men, to Ashley, Normanby, Ebrington, and above all to Dr. Southwood Smith, who had revealed a flair for propaganda in the illustrations he had caused to be drawn for the Report of the Children's Employment Commission. When, in December 1844, Chadwick heard that Southwood Smith was organising a meeting at Exeter Hall, he expressed his hearty approval; but he wrote warningly to the Doctor; “I must beg of you to be careful not to mix me up with the meeting. It will do no good and may hinder much my power of being useful.”³

¹ E. C. to Lord Ashley, 11 May 1844.

² E. C. to James Simpson, 3 February 1844.

³ E. C. to Southwood Smith, 9 December 1844.

The meeting, which took place on 11 December 1844, was presided over by Lord Normanby; and it may be supposed that not the least of the benefits Chadwick expected from the campaign was that it diverted his Lordship's energies into the safer channels of a non-political agitation. He had visited the huts of hundreds of negro slaves in the West Indies and the cabins of Irish cottiers, he told his audience, but "he would rather pass his life in any one of the first, or in most of the last, than he would inhabit one of those dens or cellars too often used as dwellings of the industrious poor of this country." Dismissing the Health of Towns Commission as "but a bad substitute for action," he hoped that "they would separate this day with a firm determination to do all that in them lay to prevent the seasons again revolving still to find so dreadful a contrast existing between an increasing national prosperity and a deepening misery of the masses."¹ As a result of the meeting a Health of Towns Association was founded, with Southwood Smith and Professor W. A. Guy as secretaries; and in the following months branches were established in Edinburgh, Liverpool, Manchester, York, Halifax, Derby, Bath, Rugby, Marlborough, Walsall, Plymouth, and Worcester.²

In the next few years the Association, in lectures and pamphlets and petitions, hammered away at Southwood Smith's proposition that "the heaviest municipal tax is the fever tax." Its lecturers, Lord Ebrington, the lawyer James Simpson, the clergyman the Rev. C. Girdlestone, the doctors W. A. Guy, R. D. Grainger, J. Toynbee, instructed audiences of both the working and middle classes in the elementary principles of ventilation, drainage, and civic and domestic cleanliness. In Liverpool a *Health of Towns Advocate* was started by Dr. John Sutherland, fifteen hundred copies of the first number being distributed gratuitously. In January 1847, on the eve of the introduction of Lord Morpeth's first Health of Towns Bill, the Metropolitan Association began the publication of a *Weekly Sheet of Facts and Figures*.³ Joseph Toynbee organised in London an ancillary Metropolitan Working Classes' Association for Improving the Public Health, which adopted

¹ *Abstract of Proceedings of Public Meeting at Exeter Hall, December 11, 1844* (pamphlet), pp. 5, 12, 13.

² *Health of Town Association: Report February 24, 1847* (pamphlet), pp. 7, 9.

³ *Ibid.*, p. 10.

the motto, "We can be useful no longer than we are well"; the example was followed at Newcastle and Gateshead where a Working Men's Association, which included thirty "foremen and other influential workers," was formed in friendly alliance with the local Sanitary Association.¹ In many other towns the working classes, under middle-class guidance, set up associations, which were prolific in advice to their fellow workers and in memorials to the Government. But not everywhere was there this docile acceptance of middle-class tutorship; and Chadwick heard that at Glasgow "some noisy, brawling, turbulent Chartists had got mixed up with the agitation," and that "their way of doing business had disgusted the more discreet."²

It was all a bit vulgar and demagogic, thought some of Chadwick's friends. He was rather apologetic himself. "Needs must," he told the Bishop of London, "where the opposing interests are so strong as they are . . . and so influential with Members of Parliament."³ But though he refused to have his name connected openly with the Association, he took full advantage of this powerful instrument of propaganda which lay so ready to his hand, and, by a kind of ventriloquism, its publications incorporated the memoranda he supplied to them, and its deputations spoke arguments he had suggested. Thus, on 3 November 1846, he sent Ashley a review of progress since 1837, together with the mortality bill for the quarter, which showed some 15,000 deaths above the average, proving that "if we are idle death is not." It was a "singularly important" paper, thought Ashley. "I made use of it today at a meeting of the Health of Towns Association, which I hope may at last produce some movement on the part of the Government. It is almost the boldest document ever published by a subordinate department."⁴

It was, taking the country as a whole, a sprawling, loosely knit campaign, much less a pitched battle fought to a general's plan than an affair of local skirmishes under guerrilla leaders. In the years of the cholera especially, little agitations, auxiliary to the

¹ *First Annual Report of the Newcastle and Gateshead Sanitary Association, 1848*, pp. 14-15.

² Thomas Beggs to E. C., 11 April 1846.

³ E. C. to Bishop Blomfield, 18 November 1847.

⁴ E. C. to Lord Ashley, 3 November 1846; Lord Ashley to E. C., 6 November 1846.

national movement though often quite independent in their origin and development, were ignited in many places by the energy of some public-spirited individual or group, to blaze fiercely for a few months or a year or two, perhaps, and then to flicker out as the enthusiasm or the wholesome fear departed. In 1849, for instance, the Christian Socialists were busy in the slums of Bermondsey, and had a wild scheme for waylaying the Prince Consort with a memorial against the sanitary condition of the district.¹ Chadwick seems to have known nothing of their activity—or, it may be, he studiously ignored “Parson Lot” and his Chartist friends. There must have been many enlightened clergymen like Charles Kingsley who asked their parishioners, “Who Causes Pestilence?” and whose sermons attacked the *Deus ex machina* theory of judgments and visitations.”² There must have been even more sturdy doctors like Kingsley’s Tom Thurnall, pitting their science and blunt commonsense against the dirt and prejudice which surrounded them, devoted allies of Chadwick and the General Board of Health against “that ‘local government,’ which signifies, in plain English, the leaving the few to destroy themselves and the many, by the unchecked exercise of the virtues of pride and ignorance, stupidity and stinginess.”³ As a propagandist movement, however, the public health agitation did not approach the power of the Anti-Corn-Law League. Middle-class opinion never organised itself so formidably behind Ashley and Normanby and Southwood Smith as it organised itself behind Cobden and Bright, and the *Weekly Sheet of Facts and Figures* never exerted anything like the influence of the *Anti-Bread-Tax Circular*. The Anti-Corn-Law League put before the public a single, easily comprehended aim, the repeal of a set of laws which possessed the ideal quality for the propagandist’s purposes that they could be shown to be taxes on the people’s food. The Health of Towns Association faced a complex of problems, often of a technical nature, about whose solution there was frequently a division of opinion even in their own ranks. Both professed to be dealing with the same disease, the “Condition of England

¹ G. Kendall, *Charles Kingsley and his Ideas* (1947), p. 76.

² Ibid., pp. 75, 77. “Who Causes Pestilence?” was the title of a series of sermons delivered by Kingsley at the end of 1848.

³ C. Kingsley, *Two Years Ago* (3rd ed., 1860), p. 213.

Question”; but the Leaguers prescribed a specific, while the sanitarians could recommend only a prolonged and exacting course of therapeutics. The extraordinary success of Cobden and Bright was won because they combined the appeal *ad misericordiam* of the farm labourer’s “I be protected and I be starving” with a cogent economic exposition that Repeal would bring increased trade, higher wages, and even a better market for the farmer. The weapons of the Anti-Corn-Law League, though they were sharpened and given their cutting edge by the misery of the lower classes, were forged out of the solid core of middle-class interests. But was there any profit in sanitation? Maybe there was, if you cared to go into the figures of Chadwick’s Towns Improvement Company, or if you accepted his thesis that the labourer, as much as any productive machinery, repaid care and money spent. But how could sewers compete with railways as fields for investment? Projects for bringing drains and water into the homes of the people were looked upon as too “philanthropic,” “humanitarian,” and “patriotic” to be good business. The capitalist contributed to schemes for improving the condition of the labouring classes in much the same spirit as he put money on the plate at church, expecting to draw his return not in hard cash but in the transcendental currency of Butler’s “Musical Banks.”

It was this feeling which Chadwick had set himself to combat since the earliest of his social investigations. Nothing disgusted him more than the attitude of those who looked complacently on the poor as objects of charity, and who found an easy discharge from the labour and responsibility of seeking a solution to the problems of human misery by means which sapped the independence of the workers. He believed that charities created much of the misery they were intended to relieve and could not relieve all that they created. It might even be said, he thought, that if the trustee of a fund for the distribution of alms ate and drank the money himself, or if the man appointed to administer a charity for the sustenance of foundlings kept a mistress instead with the proceeds, they would have performed a work of public benefit; the corruption being confined to one rather than being diffused amongst a multitude. Moreover, charity of this kind was directed only towards the visible and pitiful effects, and failed to come to grips with the physical causes which produced them.

Lady Bountiful was well-meaning but muddle-headed. She was touched by the sight of the sick labourer, lying untended in his damp, cold room, surrounded by the circle of his pale, ill-fed children; but she sent him medicines, blankets, and fuel, instead of removing by drainage the dampness and pestilential miasma which caused the disease; she sent him money and food, instead of eliminating the depressing factors in his environment which led him to spend at the beer-shop the wages which would have sufficed to feed and clothe his family. She would have done better to have followed the example of the benevolent lady of St. Margaret's parish, who, instead of distributing alms amongst her tenants, spent a hundred pounds on the drainage of their houses.

Chadwick regarded mistrustfully, therefore, the activity of those whom the world called "philanthropists"—Dr. Southwood Smith, for example, "who is a man of benevolence merely and who has mismanaged the Sanatorium."¹ Not benevolence but self-interest was the motive which should be invoked by the social reformer. The logic of Chadwick's argument runs simply enough. More and more he looked to the great capitalists, whose crude creative energy was equipping Britain with an expensive, ill-planned, but modern system of communications, to furnish the brains and the money to rebuild the towns. Such men would move only if they were guaranteed a safe six or seven per cent on their outlay. Now all Chadwick's inquiries and experiments tended to prove that profits as high as this could be made on the construction of sanitary works; and that the capitalists were overlooking an immense untapped market right under their noses—the millions of the working class, dirty, ill-clad and miserably housed, the supply of whose needs would form the basis of a score of new industries. It followed, if this were a true picture of the situation, that it was a grave error in tactics to let it be put about that model houses and reconstructed sewers could return no more than four per cent. Thus, when Southwood Smith outlined to him in July 1844 the plans of the Society for Improving the Dwellings of the Industrious Classes, he was quick to offer his advice and

¹ E. C. to Lord Lansdowne, 31 July 1844. A forerunner of the modern nursing home, the "Sanatorium" was opened in 1842 at Devonshire House, Regent's Park, as a "home in sickness" for members of the middle classes. (C. L. Lewes, op. cit., pp. 80-4.)

sympathy, but he firmly declined to allow his name to appear as one of the Committee. He was confident, he explained, that if large capital were engaged a profit of six or seven per cent could be obtained from a superior dwelling let at the same rents now charged for wretched hovels; but the Doctor based the institution on charity and benevolence and proposed to restrict the profits to four per cent, so discarding the powerful stimulus of commercial success. He urged on Southwood Smith, therefore, that the Board of Trade should be asked to reconsider the limitation of interest which had been inserted in the Society's charter, and "to place the proceedings on a commercial principle simply, as being really the most benevolent in its ultimate operation to the working classes."¹

By the end of 1844 Chadwick was telling his friends that there was little chance of introducing comprehensive measures of sanitary improvement with the speed and vigour he desired, unless they were carried out by commercial bodies. Water supply, he assured one, would everywhere be best entrusted to "a private Company on *proper conditions and with new securities for the public*: making the Company *lessees* instead of proprietors."² Administrators, he informed another, could not have the same vital interest in success, or the same motives to vigilance and economy in the expenditure of the public money as capitalists had in spending their own.³ This excessive enthusiasm for private enterprise (but, be it noted, under strong securities for the public interest) was out of character, and was soon to wilt. It had its origins in a complex of considerations: his scorn for local administrative ability, his anxiety to get sanitary reform under way without waiting on the slow pace of a reluctant Government, the influence of the engineer, Thomas Hawksley, whose Nottingham Water Company seemed a model of efficiency and economy. Possibly his marriage in 1839 to Rachel Dawson Kennedy, fifth daughter of John Kennedy, the cotton manufacturer, had left him more open to the arguments of Manchester. Certainly he had lately made the personal acquaintance of some of the great railway capitalists, and had imbibed from them something of the

¹ E. C. to Southwood Smith, 1 July 1844.

² E. C. to J. Hodson, 10 April 1845.

³ E. C. to Raikes Currie, 26 October 1844.

romantic theory of capitalism, the hero of which was the self-made man, who, by energy, thrift, and a strict attention to "sound economic principles of trade," forged upwards from the bottom of the social pyramid to become the chairman of a company. Such a man, for example, was James Morrison, the railway director, who had come up to London with all his worldly goods in a cotton pocket handkerchief, had prospered, married a partner's daughter, and was now worth three millions. There seemed no reason why Edwin Chadwick also, if he turned his abilities to commerce, should not in due time become a millionaire.

On these twin postulates, therefore—that municipalities were incompetent to manage such services as gas and water supply; and that, of all motives to appeal to, self-interest was the steadiest and most powerful—was based Chadwick's grand scheme for a Towns Improvement Company. His interrogation of witnesses before the Health of Towns Commission had left him, as we have seen, with the conviction that there was money to be made not only out of the supply of water but also out of the disposal of sewage. The figures of practical engineers and farmers could be shown to prove it. For a penny a week supplies of water, constant and at high pressure, could be extended to lower-class houses; for another penny those houses could be drained; for another pavements and roadways could be washed and swept. A company could safely contract to perform these services at a fair rate of profit, and in addition it could count on an immense return from the sale of rich town manure to progressive farmers. Three points were essential to the scheme. The company must have a monopoly of the field of supply. It must contract for all three of the interdependent services of water supply, drainage, and sewage disposal. And, finally, the service must be universal, to all classes of the community, and paid for by a compulsory rate. For, as he explained to Thomas Hawksley, "the best securities for a fair and liberal and permanent profit will be in the close consultation of the wants conveniences comforts and means of the greatest number of the poorest classes of the consumers and in moderate profits on extended supplies, rather than very high profits on narrow supplies."¹

¹ E. C. to T. Hawksley, 25 November 1844.

The field of operations open to such a company seemed boundless. In Britain, in the colonies, in every country in Europe, there were scores of towns which needed water and sewers. Carlisle, Durham, Frome, Kidderminster, Salisbury, Merthyr Tydfil, Stourbridge, Walsall, Wednesbury, West Bromwich, Wrexham, Wolverhampton—these were only a few of the places without an adequate water supply. Berlin had already asked Chadwick's advice, and he had heard that he was a greater prophet in Germany than in England. Paris, again, would make the best enterprise in Europe; if only Guizot would take his mind off Algiers and draw his head for a moment out of the clouds of high politics, Chadwick could show him how the highest rooms in Paris could be supplied with filtered water for three sous a ton, as compared with the nine francs at present paid to the *porteurs d'eau*.¹ Turning over these possibilities, Chadwick was flushed with the vision of himself as managing director of a vast public utility company with ramifications in every country, which would be the instrument for carrying out his sanitary schemes and would serve at the same time as a "golden bridge for escape" from the insults to which he felt himself exposed at Somerset House.²

The scheme began promisingly. Sir John Easthope, the first chairman of the London and Southampton Railway, gave his "very hearty concurrence," and declared his willingness to invest £50,000 or more.³ Other capitalists of European reputation, among them Raikes Currie, Sir George de Larpent, James Matheson, James Morrison, John Moss, Edward and Anthony Strutt, J. L. Ricardo, Rowland Hill, Nassau Senior, fell under the spell of Chadwick's tale of gold from sewage. "Such a conjunction, such an Assembly of Eagles on the same perch had perhaps never before been seen," he exclaimed in delight.⁴ The company was registered on 7 August 1845, with Lord Francis Egerton as its chairman, three millionaires amongst its backers, and a team of technical consultants chosen by Chadwick for their known sympathy with the most advanced ideas in sanitary engineering—Thomas Hawksley and Chadwell Mylne for water

¹ E. C. to T. Hawksley, 11 August 1844; to Sir John Easthope, 28 November, 31 October 1844.

² E. C. to T. Hawksley, 8 August 1845. ³ E. C. to T. Hawksley, 22 October 1844.

⁴ E. C. to Sir John Easthope, 2 October 1845.

supply, John Roe and Butler Williams for drainage, Smith of Deanston and Captain Vetch for sewage disposal. It was proposed to raise £1,000,000, on which a return of at least six per cent, and perhaps nine or ten per cent, was promised. In a tour of the provinces Chadwick expounded to local capitalists the advantages of investing in a venture which offered double the return of the average railway speculation, and combated everywhere the heresy of a water supply divorced from drainage and sewage disposal. At Bristol the Merchant Venturers showed a disposition to co-operate; at Leicester, Lancaster, and Exeter, he secured influential converts; at Manchester he addressed members of the Corporation for an hour, and made an impression on Cobden. He returned in high hopes to London with engagements to the extent of £700,000. From Lyons, too, came an attractive offer; the Paris negotiations seemed hopeful; and inquiries were received from Athens, Berlin, Frankfort, and Munich.

But good will and promises and five competent engineering reports remained the extent of the company's achievement. Chadwick's prospectus was swamped in a sea of railway advertisements; his engineers were lured away by offers of seven and a half guineas a day as railway surveyors; and his millionaires succumbed one by one to the madness of the great railway boom. At Leicester, after six months of negotiation with local capitalists, who were reluctant to see the control of the town's water supply pass to a London company, only £7,000 of the £70,000 required could be raised. At Manchester and Bristol Chadwick's company found itself opposed by separate water schemes, which drew away support because their offers seemed less speculative. The optimistic prospectus was founded largely on the experience of Thomas Hawksley, and it was a severe blow to Chadwick when this expert of his own choice began to exhibit heretical tendencies. He was bewildered when Hawksley accepted a retainer from the Lancashire Water Company in September 1845. How could Hawkesley square advocacy of a new company with his published views which condemned the intrusion of second capitals into the same field? Such a scene would rejoice the old-style water engineers, the Simpsons and the Wicksteeds exceedingly!¹ When Hawksley began to cast doubts on the accuracy of

¹ E. C. to T. Hawksley, 31 August 1845.

Chadwick's figures for the returns from sewage irrigation, the break became complete. It was certainly strange, if Hawksley was so dubious of the soundness of the scheme, that he waited eighteen months, and until Chadwick was having difficulty in raising capital, to reveal it.

But the most fundamental weakness of all was the impression which had spread in business circles that the company had philanthropic objects. "One of our Capitalists had objected to *me!* as tending to taint the list with benevolence and philanthropy," Chadwick told the chairman with uneasy heartiness.¹ "So good a commercial man as Mr. Bates," he wrote urgently to Nassau Senior, "should not be allowed to labour under the delusion that there is any more patriotism in the objects of the proposed Company than there is in the every day operations of his own counting house in supplying the wants of the needy in all parts of the world with goods, or money, and receiving in tale, and measure, in a solid and tangible shape the expression of their sense of gratitude for the amount of service rendered to them. . . . He owes some apology to the gentlemen whose names are on the prospectus for so injurious a supposition."² But it was in vain that Chadwick pointed to the adhesion of John Moss, the chairman of the Grand Junction Company, "a firm minded man who would not let his feelings get the better of his pecuniary judgment";³ in vain that he declared that for the sake of humanity the percentage should be looked to with the eye of a Shylock.⁴ It was whispered that a company to furnish the houses of the poor with water and drains must be humanitarian and patriotic, and as such offensive to the business conscience.

Some £600 had been spent on the prospectuses, advertisements, and reports of the Towns Improvement Company, of which nearly £500 had come out of Chadwick's pocket. The money had not been entirely wasted. For a moderate outlay the company had examined seven towns, Manchester, Salford, Bolton, Leicester, Bristol, Exeter, and Derby, and had produced exploratory reports on the first five of these, indicating how between two and

¹ E. C. to Lord Francis Egerton, 1 November 1845.

² E. C. to Nassau Senior, 11 April 1845.

³ E. C. to Lord Francis Egerton, 1 November 1845.

⁴ E. C. to the Earl of Lovelace, 8 March 1845.

three million pounds might be profitably spent on their improvement. A surgeon of Manchester, Dr. P. H. Holland, had produced a report on that city which was adjudged by Chadwick to be the best of its kind that had yet appeared.¹ Altogether this field-work in the service of the company undoubtedly stood Chadwick in good stead when he came to direct the activities of his Inspectors at the Board of Health.

After 1846 the Towns Improvement Company fell into a state of suspended animation from which Chadwick never succeeded in awakening it. But to its curious history there was a still more curious appendix. By a flash of characteristic ingenuity, Chadwick had conceived the idea of distributing sewer manure by pumps mounted on canal boats, and now, with three other sanguine spirits, Dr. P. H. Holland, Robert Rawlinson the engineer, and Joseph Whitworth the inventor, he formed an association to conduct an experiment on the Bridgewater canal. His hopes—as usual—were high. Farmers were shaking their heads over the shortage of manure, yet the sewers of the towns were veritable guano mines. The rich refuse of the towns might be ferried down in boats to the barren and starving farm land, and the produce would float back to feed the workers in the factories. "Chadwick's Elixir" would make the banks of every canal green and fertile.

The idea found little favour, however, with the rugged farmers of South Lancashire, and they listened with a canny scepticism to these plausible strangers, with their pumps and jets and hundreds of yards of canvas hose, who promised them agricultural miracles, and offered to manure their fields in return for half the extra crop obtained. Where Dr. Holland, who had been put in charge of the experiment, did find employment for his floating pump, few of his hopeful clients noticed that remarkable transformation of their produce which he had led them to expect. Part of the misfortune Chadwick attributed to the unhappy Dr. Holland, who was not the man to cope with "this plaguy irrigation." But the failure was due chiefly, he felt, to the farmers of the old "round frock" school, who could not be convinced that they might pay an additional rent by saving the manure which they now wasted. It was a psychological phenomenon, this bucolic resistance to new ideas. As an example of "agricultural logic," Chadwick would tell how

¹ E. C. to Dr. P. H. Holland, 28 December 1845.

the Duke of Bedford attempted to prove to one of his tenants that a certain piece of ploughing could be done as well by two horses as by the four at present used by the farmer. Words failing to carry conviction, the Duke gave an actual demonstration. "The only response which his Grace obtained was that way might be all very well to be worked by a Duke *but he as a farmer could not afford it.*"¹

Chadwick continued the experiment till the end of 1849, paying expenses out of his own pocket, despite Holland's continually more depressing reports and the prudent secession of his allies. It was a courageous act of faith, and when defeat could no longer be hidden, he was keenly disappointed. The successful application of sewer manure to agriculture, he believed, would do more than anything else to encourage the adoption of a better system of drainage and water supply and the universal introduction of the water-closet. And to the end of his life the productive powers of liquid sewage remained his "King Charles' Head," the fascination of a fortune from town guano drawing him back time and again to the idea of a Towns Improvement Company.

¹ "Notes on Agricultural Logic," MS., n.d.

CHAPTER VI

STRUGGLE WITH THE SPECULATORS

THE Queen's Speech at the opening of the 1845 session referred to the Health of Towns Report, and voiced the hope that it would form the basis of a measure for "promoting the Health and Comfort of the poorer Classes of My Subjects."¹ So, for the first time in history, a British Government announced that its legislative programme included a Public Health Bill. The period of inquiry, begun in 1838, was ended; and Chadwick's seven years of ceaseless investigation and argument had brought the Government to the point of action. The question remained whether that action would be as bold and as comprehensive as he had planned. He had wished—as the memoranda he had laid before Buccleuch show clearly—that the Commissioners would embody their recommendations in the actual clauses of a Bill, dictated by himself, and so strongly buttressed by the evidence and the authority of a Royal Commission that it must pass without substantial alteration by the legislature. The Government had other intentions, however, and a couple of months before the Health of Towns Commission presented their Second Report the preparation of a Public Health Bill was entrusted to the Earl of Lincoln, First Commissioner of Woods and Forests. The decision made two things plain: that the Government looked upon the Bill as the minor measure of a minor department, and that they felt themselves in no way bound by the conclusions of an inquiry dominated by Edwin Chadwick.

Lord Lincoln immediately turned his back on the Health of Towns Commission, and sought his authorities among the builders and architects of the Woods and Forests—whose "working men are entirely of the old school."² The success or failure of the

¹ *Hansard*, vol. lxxvii, p. 4, 4 February 1845.

² E. C. to Lyon Playfair, 14 December 1844.

Towns Improvement Company depended very largely upon the provisions of Lincoln's Bill; and it was the future of this, his "golden bridge for escape," which was Chadwick's chief anxiety throughout 1845. If the recommendations of the Commission were adopted, companies of the old style, with their separate water schemes and restrictive policies, would be handicapped, and facilities would be granted to a company prepared to carry out combined works by a contract under public regulation. As the 1845 session advanced his hopes rose that Lincoln might be persuaded to ignore the "prejudices of various pestilential interests,"¹ and give his backing to a well-drawn Bill; in which event the Towns Improvement Company might at once take the field, examining places and recruiting local capitalists, in readiness for a sweeping campaign on the collapse of the railway boom. Lincoln's Bill made a momentary appearance in July 1845, and was then withdrawn for consideration and amendment during the recess.² Another year's delay! And there was nothing to attract Chadwick's capitalists in Lincoln's proposal to establish elective boards in the localities, "which would hold out inducements only to the petty tradesmen of a country town, who alone will serve under the orders or humour the caprices of the other petty tradesmen of country towns."³

While Chadwick thus watched anxiously the delaying and possible crippling of his main measure, on the interments question he faced complete deadlock. Throughout 1845 Sir James Graham maintained an imperturbable front. When a newspaper report was brought to his attention, describing the practice in the Clerkenwell churchyard of disinterring bodies after a few days, chopping them with a spade, and burning the pieces in a bone-house, he consented to make inquiries—but thought there would be some difficulty in removing the cause of the evil.⁴ A week later he observed that he feared that to prohibit burial within the walls of a city "would not be in harmony with the feelings of a great body of the people."⁵ Chadwick exploded into protest. Who were these people who were so attached to the practice?

¹ E. C. to Lord Ebrington, 25 June 1845.

² *Hansard*, vol. lxxxii, p. 1077, 25 July 1845.

³ E. C. to R. A. Slaney, 8 July 1845.

⁴ *Hansard*, vol. lxxvii, p. 1234, 26 February 1845.

⁵ *Ibid.*, vol. lxxviii, p. 325, 5 March 1845.

Was it the working classes, the poor, the uneasy, the heavily laden, who dwelt with complacency upon burial in the over-gorged charnels of the metropolis, where newly buried corpses were hacked and hewn by the sexton's shovel to make way for others? Was it the middle and higher classes, who were abandoning family vaults in the graveyards, preferring to pay heavily for interment in Kensal Green cemetery? Since it was clearly none of these, then who constituted this "great body?" A portion of the clergy! "Are we to endure to have it held up before this country and before all Europe that respect for the dead and the health of the living are to be prostrated for the maintenance of clerical domination, or rapacity for fees or for the lowest traders' pelf? . . . Is it to be allowed to go forth that the moral courage of our leading public men is so low, or their perceptions so obtuse, or their capacity so feeble that administrative measures which have been carried out in Austria, Prussia, Russia, Weimar, nay even in Spain, and are seen to elevate the feelings of the population are beyond the capacity of our parliament or our Government!"¹

On 8 April 1845 W. A. Mackinnon challenged the Government with a resolution condemning intramural interment. Faced with an inescapable decision, Graham came out openly in support of the existing system. Waving aside the "exaggerated views entertained on the subject," he declared that it would not be easy to stop people being buried in the places where their kindred lay; if they adopted Chadwick's suggestion, and prohibited absolutely interments in towns, public feeling would be greatly excited, if not grossly violated. He refused to admit that the public health was endangered; there was no metropolis in the world where health was so well preserved. Were the Government to undertake the arrangements for burial, it would be intruding in a field where private companies were beginning to enter; so they should take care "lest, by a compulsory enactment, they interrupted that course of feeling, which, if left to itself, would remedy the evil." Graham was decisively beaten in the debate, and Mackinnon's resolution was carried by 66 votes to 49.² Chadwick, who judged that the vested interests in burial fees had prevailed with the Home Secretary, was delighted, but the victory brought no change in the attitude of the Government, now clearly resolved

¹ E. C., MS. fragment, n.d. ² *Hansard*, vol. lxxix, pp. 330-59, 8 April 1845.

to belittle the nuisance because of the trouble they would be put to in applying a remedy.

The Corn Laws dominated the Parliamentary scene in 1846, and it was soon evident that until the manufacturer and the landlord had played out their parts in the drama of the session, the public health reformers must possess themselves in patience. But the year showed some notable advances, and the fact that not all of them originated directly with Chadwick proved that the "Sanitary Idea" was pushing out roots into many influential quarters. An Act was passed to authorise Town Councils to establish public baths and washhouses, defraying the cost out of the rates (9 & 10 Vict. c. 74). A Nuisances Removal Act (9 & 10 Vict. c. 96) empowered Boards of Guardians in the rural areas to indict nuisances before the Justices of the Peace, and, where the order for removal was met by recalcitrance or continued neglect, to take steps to execute it at the expense of the person responsible. Sanitary legislation thus made its first tentative step into the country districts; and for the narrow purposes of the Act the parish was replaced as the responsible authority by the Poor Law Union, with its superior efficiency, its paid medical staff, and its responsiveness to control and instruction from the centre. Another clause of the same Act authorised the Privy Council to issue emergency Orders if any place should be threatened by "formidable contagious or epidemic disease." This measure was, in fact, the first payment made by fear on an insurance policy against the cholera, which even then was advancing on the south-eastern frontiers of Europe.

To balance these small gains there was another check on the interments question, and a further delay in the introduction of a Public Health Bill. In April, W. A. Mackinnon brought in a Bill drafted by Chadwick on the conclusions of the Interments Report.¹ "Sir James Graham has become so unpopular," Chadwick wrote hopefully to the Bishop of London, "that it is more than probable that his opposition would contribute to the success of Mr. Mackinnon, who will receive support from both sides of the house."² Graham unbent so far as to allow him to circulate privately amongst the Bishops the provisions of the Bill; but with the collapse of the Tory Government, it disappeared once

¹ *P.P.*, 1846, vol. i, p. 255.

² E. C. to Bishop Blomfield, 9 March 1846.

more from view. Not until the General Board of Health was installed at Gwydyr House did Chadwick get the opportunity to carry out his interments scheme.

Lord Lincoln's Bill reappeared, unchanged, at the beginning of the session,¹ and Chadwick promptly joined with Southwood Smith to draw up a detailed report on its provisions for publication by the London branch of the Health of Towns Association. This interesting pamphlet illuminates not only the defects of the Government measure, but also certain peculiar limitations in the view-point of the sanitary reformers themselves.² On the whole, the report conceded, the Bill was a great improvement on earlier attempts. It recognised the principle that the whole of the natural drainage area, and the public works therein, should be under a single authority. It protected the interests of the community by the supervision of an impartial Government Inspector; it provided for local surveys by competent engineers; it permitted local authorities to enter into contracts for the maintenance and execution of combined works, under the supervision of a paid surveyor; it stipulated that an inspector of nuisances and a medical officer of health should be appointed. All these things were new, and all were steps in the right direction. The tone changed sharply from satisfaction to criticism, however, when the report went on to consider the administrative machinery. This novel and complicated subject was to be entrusted to a man whose every moment of time was already in incessant demand from the vast and undifferentiated functions of an unwieldy department: the Home Secretary—Cabinet Minister and party leader, occupied with Irish affairs, the regulation of factories and prisons, the supervision of Poor Law Unions, the control of the magistracy and the Metropolitan Police. Even Sir James Graham, with his "athletic strength and powerful intellect," exhibited plain signs of overwork, and—Southwood Smith charitably suggested—the failure of measure after measure in his hands was due in large part to the inadequate attention he could afford to give them. The practical result must be to abandon public health to the chance zeal of a clerk or some other unknown and irresponsible sub-

¹ *P.P.*, 1845, vol. v, p. 363.

² *Report of the Committee to the Members of the Association, on Lord Lincoln's Bill*, 1846; written by Southwood Smith, in consultation with Chadwick.

ordinate. It would be far better to charge the duties on the Privy Council, who might delegate one or more of their number to give constant attention to sanitary questions; and where, the report omitted to add, Edwin Chadwick might secure in public health the key position that Kay-Shuttleworth now occupied in education. The reformers were no better pleased with the proposal to establish local Boards, which committed the cardinal error, illustrated time after time in the shady history of the Sewers Commissions, of making a numerous local authority an executive instead of a supervisory body. Responsibility for planning the public works should be concentrated on the local surveyor, a qualified civil engineer; the local Board, while empowered to determine the expediency and efficiency of the works, should not be allowed to interfere in technical matters on which they were incompetent to form a sound judgment. Moreover, they should be completely barred from executing the works by themselves. The merely permissive authority to enter into contracts should be made peremptory—and it was therefore regrettable that the Bill offered no facilities to induce joint stock companies to tender for contracts. Nor was this the only departure from the recommendations of the Health of Towns Commission. The Bill was limited to England and Wales, and London was omitted. The essential point had been missed that the loan for defraying the cost of local works should be spread over a period coincident with the benefit derived from them. There was no stipulation that water companies should furnish a constant supply of filtered water at high pressure; and phrases in the Bill clearly envisaged the continuance of the cesspool and the privy.

Great advance though the Bill was on Lord Normanby's measures of four years earlier, therefore, its provisions showed that the reformers had a long way yet to travel. It was soon clear, however, that there was no chance of the Bill passing into law in the 1846 session. Chadwick resigned himself to another twelve months' delay, until the new Whig Government should recast the measure bequeathed to them by Lord Lincoln. Perhaps, he consoled himself, the change of Government might justify a year's postponement. Lord Morpeth, who succeeded at the Woods and Forests, was certainly more amenable than Lord Lincoln, and no Home Secretary could be less sympathetic than Sir James

Graham. When Lord John Russell made an address to his constituents in July 1846, he announced his intention of taking up this grievously neglected field of legislation.¹ Chadwick was cheered; public opinion was advancing on sanitary questions, he felt, and they were being officially thought of at last.² Meanwhile the London and provincial branches of the Health of Towns Association passed their resolutions and circulated their leaflets; Southwood Smith and Dr. Holland wrote their articles; and Chadwick still dreamed and planned for the conquests of his joint stock company.

1846 is the year of the Andover Committee, and of Chadwick's final break with the Poor Law Commissioners, which will be described in the next chapter. The defence of his reputation against his official superiors was not the only heavy burden which the events of the session threw upon him. During the lull in the main battle for a Public Health Bill, he engaged in two brisk campaigns against the over-mighty capitalists of water and railways. For to Chadwick the self-government of capitalists was no better than the self-government of local authorities. He had great faith in self-interest. He commended it as the spring of individual vigour and efficiency; and it figured prominently in his thought as the most persistent and calculable element in human character. But he saw no evidence at all that social benefits resulted of necessity from its pursuit, and much which persuaded him that without the barriers erected by the law its undirected energies might disrupt society. He put his trust, therefore, not in the rule of some "invisible hand," blending the interests of the individual and society in a mystic reconciliation, but in the secular authority of the State which, abandoning the superstitions of *laissez faire*, should intervene to guide the activities of individuals towards the desirable goals of communal welfare. In this spirit he made a notable attempt to bridle the irresponsible power of the railway companies, which in this intoxicating boom year he saw thrusting recklessly forward with their plans at the cost of the moral and physical health of the great body of workers in their employment. He aired the scandals of railway gang-labour indicating how they could be removed by Government inspection

¹ E. C. to Dr. P. H. Holland, 4 July 1846.

² E. C. to J. Whitworth, 28 September 1846.

and the recognition of employers' liability for accidents, and forced a reluctant Government to set up a Committee of Inquiry. This is not the place to tell that now almost forgotten story,¹ but his contest with the water companies was fought on similar issues and illustrates the same point.

The publication in the previous year of the Second Report of the Health of Towns Commission, foreshadowing public control of water supplies in the not too distant future, had been followed by a sudden rush of water companies to seize the most eligible sources for the supply of towns. In this Chadwick saw a double danger. At the very moment when legislation was under consideration for combining water and drainage in every town, and for extending to all classes constant supplies of pure water, separate water companies on the old model, with their intermittent service and restrictive policies, were establishing themselves in positions of vantage; in some places, indeed, rival companies were being formed, threatening to develop a type of competition condemned by the Royal Commission only a few weeks before. Once established, such companies would be obstacles to the introduction of the new principles; they would be able to demand large compensation if they were disturbed; and Chadwick had no doubt that their promoters were, in fact, speculating on forcing the inhabitants to pay heavily when a Public Health Act had been adopted.² In the second place, these separate schemes endangered the Towns Improvement Company, his chosen instrument for the execution of sanitary works. Investors knew there were dividends in water, but they were not so easily persuaded of the profit to be derived from drainage; if, therefore, Chadwick's company were denied control of the water supply, it would lose the "commercial force, which is so salutary in overcoming the *vis inertiae* of the towns themselves."³

Hence Chadwick condemned "this hurrying and grabbing of water sources,"⁴ and instructed his friends that the Press should

¹ Papers read before the Statistical Society of Manchester on . . . labourers engaged in the construction and working of railways, 1846; Report of the Select Committee on Railway Labourers, P.P., 1846, vol. xiii, p. 411; and my paper on "Edwin Chadwick and the Railway Labourers" in the *Economic History Review*, Second Series, vol. iii, No. 1, pp. 107-18, 1950.

² E. C. to R. Monckton Milnes, 23 February 1846.

³ E. C. to Lord Francis Egerton, 2 April 1846.

⁴ E. C. to Thomas Hawksley, 3 November 1845.

open fire at once on all separate water schemes, for "all those which gain ground will take it from us, from better measures."¹ Early in 1845 he had drawn up a set of conditions, and had urged on the Government that the promoters of Private Bills for water supply should be informed that they must insert them or lose their Bills.² These proposals, however, in which benefits to the consumer were nicely balanced against privileges to the company, had proved too strong for the Government to accept. The only result of his representations was the insertion into some Bills of a clause subjecting the promoters to any general regulations that might later be approved; and this, as he complained, was too feeble a safeguard to deter the speculators. Failing to secure allies among the Tory Ministers, he declared a private war against the water companies in the summer of 1845, employing Thomas Hawksley, the Nottingham engineer, as his champion before the Select Committees. A few incidents of this obscure struggle may be pieced together from the fugitive notes and memoranda he directed to his friends on the Committees, and to supporters who were conducting parallel campaigns in the localities. There was a keen contest over the Manchester Waterworks Bill, which proposed to raise £600,000 for extension of plant which Hawksley calculated could be laid down *de novo* for £250,000. The company put forward James Simpson, a London engineer of the old school, as their expert to testify that a constant and universal supply would cost them another £100,000. Hawksley in rebuttal stated that if the Manchester company was not prepared to give a constant supply of filtered water at a penny a week to labouring-class tenements, the Towns Improvement Company would; and he went on to combat the company's assertion that filtration was unnecessary, and their demand that they should be paid extra for the supply to water-closets.³ Chadwick appeared in person to protest against a Bill promoted by the Sheffield Waterworks Company for leave to raise fresh capital, twice as much as he estimated the company should require to give a superior supply—and he had the unusual humiliation of being routed by James

¹ E. C. to Dr. P. H. Holland, 1 November 1845.

² "Health of Towns. Points for consideration in respect to Contracts for the execution and maintenance of Works of Water Supply, Drainage and Cleansing by Companies, under Private, Local, or General Acts," MS., n.d.

³ E. C. to Dr. P. H. Holland, 29 May 1845.

Simpson.¹ But he and Hawksley scored one notable success. The enlightened provisions of the Nottingham Inclosure Act² owed much to their strenuous intervention, in the teeth of bitter opposition from the Corporation. The truth was, Chadwick heard from Hawksley, the Corporation was in fear of the "Cowocracy," the Freeman's Rights Committee, "an interest I am sorry to say of the most ignorant corrupt and degraded kind—an interest which has been the curse of Nottingham as respects its Social Sanatory and Commercial prosperity for many years past."³ The contention of the Nottingham Councillors, despite the statistics, that Nottingham was the healthiest of all the large towns, their corruption (Hawksley told him that since 1800 a quarter of a million had been spent in direct bribery in the city),⁴ and their resistance to the proposal to replace cesspools by water-closets—all confirmed Chadwick in his view that the defence of the public health could not safely be entrusted to municipal authorities.

In 1846 forty-five drainage and waterworks Bills were introduced, twice the number for a normal year. Two rival companies were racing to secure water sources for Bristol, both of which the engineers of the Towns Improvement Company had examined and rejected as too hard. For Manchester, Liverpool, and Edinburgh also there were two competing water Bills.⁵ While the Health of Towns Association debated with Lord Lincoln, and the Government moved slow-footed in the direction of control, the speculators were strengthening their grip on the necessities of the public. At this critical moment Chadwick lost his champion. Hawksley was seduced from the cause by an offer from the Lancashire Waterworks Company, one of the companies whose principles he had been engaged in attacking. Chadwick regarded his defection as an act of treachery, personal communication between the two men broke off completely, and Hawksley was to be reckoned a few years later amongst the bitterest enemies of the General Board of Health. To fill his place Chadwick chose Joseph Hume, the leading Radical advocate of retrenchment,

¹ E. C. to Thomas Hawksley, 18 July 1845; to J. Parker, 1 June 1845.

² 8 & 9 Vict. c. 7 (Private).

³ Thomas Hawksley to E. C., 9 February 1845.

⁴ Thomas Hawksley to E. C., 22 September 1844.

⁵ "Memoranda on the mode of passing local acts," MS. fragment, n.d., c. April 1846.

whose voice had recently been raised against the exorbitant fees charged by Parliamentary agents for the drafting of Private Bills. On 7 April Hume moved, in the terms of a resolution which Chadwick had put into his hands,¹ for a Select Committee to examine how far the principles of the Health of Towns Commission could be carried out in the Bills now before the House for the erection of new waterworks and the execution of drainage, paving, and other improvements.

Against this background of Chadwick's attempts to check the speculators in water supplies, the full significance of the Private Bill Committee of 1846 can now be seen. Chadwick had changed the direction of his attack. To fight the speculators in detail, to contest each separate Bill in turn, was too wasteful of energy and too uncertain in result. He determined, therefore, to cut at the root of the evil—the method by which Parliament conferred privileges on sectional interests in matters which affected the community as a whole. The witnesses before Hume's Committee were marshalled by Chadwick, and some were briefed by him; he cast himself for the chief part, however, and in his evidence replied to questions which he had earlier suggested to Hume. Before the Committee, and even more forcibly in a series of private memoranda intended, it would appear, for Hume's information, he subjected the whole system of Private Bill legislation to a searching criticism. Under the forms of a legal conflict between private interests, questions of vital public concern, affecting the health and cleanliness of the community, its law and police, trade and communications, were now debated and decided. A glance over a Private Bill would soon reveal by whom it was drawn, and for whose benefit. A Waterworks Bill, for example, would contain summary and stringent remedies for the company against the consumer, but no similar remedies for the consumer against the company; a tenant whose supply was defective in quantity or quality must pay nevertheless or have his supply cut off altogether. A local improvement Bill, vesting the property in the dust or night-soil in the scavenger, would provide penalties against any person who should remove it, but no corresponding penalties against the

¹ "Memoranda on the modes of passing local acts," MS., n.d. The paper ends in the actual words of Hume's motion, and was probably drawn up for his instruction.

scavenger who neglected his duty, though much suffering and offensiveness might result from that neglect.¹ This exaltation of sectional interests above those of the general public was the natural consequence of the procedure by which the Private Bill Committees collected their evidence. Interested parties, wealthy enough to fee professional advocates and send witnesses to London, were powerfully represented before the Committees; but the inhabitants at large, and especially the labouring classes, were usually unable to obtain a hearing, and in any event they lacked funds to make the investigations on which an informed opposition could be based. As Chadwick was arguing in the parallel campaign on which he was then engaged, Hudson and his lawyers were heard, but not the railway labourers. The truth was that the Committees lacked both the time to give a full examination of the facts, and the technical knowledge to reach a sound judgment; and they grounded their conclusions upon the opinions of the professional experts who came before them. In consequence, Chadwick alleged, "a most pernicious system of trading in professional evidence" had developed. "Men of science receive retainers: and the past experience will shew give evidence according to the retainers on one side or the other as may serve with the interests of the party retaining them. . . . The imputation on lawyers of the indiscriminate defence of right or wrong by the indiscriminate use of truth and falsehood, admits of palliation, if not of defence. All the world knows upon what conditions the lawyer speaks: that what he gives as facts are the facts of his client: the advocate's cited cases and not his assertions are relied upon. But the science of the scientific man is taken to be his own science and not the science of his client, made up for the cause."² Committees on water Bills, for instance, could not be expected to be conversant with hydraulics; hence while one Committee listened to Chadwick's experts and declared in favour of constant supply, another leaned to the engineers of the London companies and pronounced it to be impracticable.

The object then must be to remove these important decisions from the atmosphere of partiality and ignorance which now surrounded them. The method Chadwick had already indicated in

¹ "Local Acts. How and for whom composed," MS., n.d.

² MS., n.d., on Private Bills.

the reports of the Health of Towns Commission. A preliminary inquiry must be made on the spot by a competent officer, unconnected with the locality and deputed by a department of State—a known and responsible informant, instead of the unknown and irresponsible persons who were at present professionally retained to give "opinion evidence" before Committees. He would hear parties who were not now heard; and those who were now heard would be heard more conveniently, and at greatly reduced expense.¹ "The facts and information are paramount: and those can only be obtained quickly, completely, economically, and satisfactorily *in situ*."² For sanitary reform the factor of expense was of the first importance. The town of St. Helens, when it planned waterworks costing £3,000, had to spend another £1,000 in obtaining Parliamentary permission to erect them. In many villages and small towns the legal and Parliamentary costs of a drainage scheme would equal the expense of laying down the house drains; and the costs for a water Bill would equal the outlay for the tenants' water pipes.³

Though Chadwick's criticisms of the water Bills were toned down, and he failed in his attempt to halt them completely, his hand is evident throughout the Committee's report.⁴ The great mass of the so-called Private Bills, they declared, were essentially public in character, yet the public were not represented before the Committees by any competent or qualified person. They recommended, therefore, that in future, where only ordinary powers were sought, means should be made available for executing projects under the authority and supervision of a Government department, without the necessity of applying to Parliament. With this object, Public General Acts should be passed for all classes of Private Bills, except those which, like Divorce and Estate Bills, were personal in their nature. The procedure under such Public General Acts should be on the lines indicated by Chadwick:

¹ "Mr. Chadwick's Suggestions relative to Private Bills. Previous Examination," MS., 18 May 1846.

² "Local Acts. How and for whom composed," MS., n.d.

³ *Report of Select Committee on Local Acts*, P.P., 1846, vol. xii, p. 1; Q. 337.

⁴ One of Chadwick's memoranda, "Local Acts. Considerations in respect of expenses and means of reducing them," is drafted in the form of a Report from the Committee. The Report actually presented contains many of the same points, put more succinctly, and phrased less strongly.

a memorial from the promoters to the department concerned, a local inquiry conducted by an inspector sent down by the department, a written report from the inspector to the department, which would then decide whether or not to grant the required authority. If it appeared likely, however, that private property would be seriously interfered with, the parties should be left to the ordinary mode of proceeding by application to Parliament; with this important difference—there should be a preliminary investigation on the spot by a Government inspector, so diminishing the great expense for the attendance of agents and witnesses in London, saving the time of Members now consumed in Committees on Private Bills, and furnishing those Committees with the local and trustworthy information which was now wanting. Finally, the report advised, to obviate the evils resulting from lack of uniformity in the construction of Private Bills, a series of Clauses Consolidation Acts should be passed, covering police, waterworks and sewage, towns improvements, and the other main subjects for which powers were usually sought.

Three weeks after its appearance the Report bore its first fruit in a Preliminary Inquiries Act (9 & 10 Vict., c. 106). This provided that the promoters of certain classes of Local Acts—for establishing waterworks, for draining, paving, lighting, cleansing, or otherwise improving any town, district, or place, or for making, maintaining, or altering a burial ground—should notify the Commissioners of Woods and Forests, who would then send a surveying officer to make a local survey, examine the promoters and their plans, and hear the evidence of local officials and other witnesses. In this way, mainly through Chadwick's efforts, another wide province of administration was brought under the jurisdiction of the Government Inspector. The experiment, as it happened, was disappointing, and the Preliminary Inquiries Act was repealed in 1850 as an acknowledged failure¹—not, Chadwick believed, because of any defect in its basic conception, but because of the manner in which it was carried out by the Woods and Forests.

In the following year a further recommendation of the Com-

¹ See F. Clifford, *History of Private Bill Legislation* (1885-7), vol. ii, pp. 890-7; O. C. Williams, *Historical Development of Private Bill Procedure and Standing Orders in the House of Commons* (1948), vol. i, pp. 115-17.

mittee was acted upon, and a batch of eight Clauses Consolidation Acts passed into law.¹ In Chadwick's eyes these were of far less importance than the local inquiry. "It appears to me that you have laid too much stress on model Bills," he told Hume. "We must carefully distinguish between mere legislative style and form, which there is no great difficulty in improving, and the matter which can only be improved by laborious investigations of particular subjects in different localities, to which mere lawyers accustomed to deal with evidence brought before them are most unapt."² But there was, in fact, something more than "mere legislative style and form" in the Clauses Acts of 1847, and in their choice of models they bear witness to the influence of the public health reformers. Thus, the Towns Improvement Clauses Act obliged the Commissioners to appoint a qualified surveyor and an inspector of nuisances; it prohibited the building of any house without adequate drainage; it permitted the Commissioners to appoint an officer of health; it permitted them to contract for a supply of water, and to construct house drains, charging the cost on the owner. The Waterworks Clauses Act limited the profits of the company to ten per cent; it imposed penalties on the company which neglected to comply with a legitimate demand for a supply to be laid on; it obliged the company to furnish water for such public services as cleansing the sewers, watering the streets, and supplying baths and wash-houses; and it required the undertakers to provide a constant supply of wholesome water under pressure, sufficient for the domestic use of all the inhabitants. By the Model Acts, therefore, a little was done to clip the independence of the water capitalists, to raise the technical standard of local works, to widen the obligatory functions of local authorities, and to put still wider powers within their reach if they should choose to take advantage of the offer.

¹ Markets and Fairs Clauses Act, Gasworks Clauses Act, Commissioners Clauses Act, Waterworks Clauses Act, Harbours, Docks, and Piers Clauses Act, Towns Improvement Clauses Act, Cemeteries Clauses Act, Town Police Clauses Act; 10 & 11 Vict., cc. 14, 15, 16, 17, 27, 34, 65, and 89.

² E. C. to J. Hume, 12 April 1846.

CHAPTER VII

RETREAT FROM SOMERSET HOUSE

IN 1845 the "disgustingly voracious habits"¹ of two paupers in the Andover Workhouse, who attempted to supplement the meagre bread ration by scrapings from the green bones they were employed in crushing, led to a violent outcry in the Press. The Poor Law Commissioners ordered an investigation by Parker, one of the Assistant Commissioners, and seized an early opportunity to dismiss him and make him a scapegoat for public dissatisfaction. This action brought to the surface all the submerged antipathies in that unhappy office. Rallying to his standard all the Poor Law malcontents—Parker, Day, Coode, Tufnell—Chadwick led an attack on the opinions and business methods of his chiefs; and the Select Committee appointed in July 1846 to investigate the Andover scandals found that an inquiry into bone-crushing and the morals of workhouse masters had widened into a discussion of the whole constitution and working of the Poor Law Commission.

In the course of his nine examinations before the Committee, Chadwick skilfully planted one barb after another in the flanks of the Commissioners. The scepticism they had openly avowed for the fundamental principles of the Act it was their duty to execute; their displeasure when abuses were brought to their attention which would require action on their part; their conduct of business by conversations at casual meetings, by private letters from single Commissioners, by unrecorded transactions in their separate offices; their toleration of the allowance system; their attempt to revive the labour rate; their suppression of the Bolton and Macclesfield report—all the accusations which had been fermenting in his mind for the past twelve years boiled over before the Committee. The Commissioners, backed by the Poor Law critics on the Committee, retorted in kind. An attempt was made to

¹ G. Nicholls, *op. cit.*, vol. ii, p. 394.

fix on Chadwick the full responsibility for the inadequate dietary scale in use at Andover and for other rigorous and unpopular measures, such as the order which disallowed fees for tolling church bells at a pauper funeral. "Well, then, if you will have it you must," cried Frankland Lewis, "Mr. Chadwick was an able man, but I thought him as unscrupulous and as dangerous an officer as I ever saw within the walls of an office."¹ It was the petulant rage of a little man; but it served to add one more touch to the picture of Chadwick as a kind of Poor Law Inquisitor, Disraeli's "monster in human shape," brooding in the recesses of Somerset House over fresh plans for separating old men from their wives, spaying the daughters of the poor, and slowly starving paupers to death on a diet of bread and gruel. Chadwick, it would appear, immediately challenged Frankland Lewis after this wild outburst, and received sufficient amends for the two to part with a friendly handshake. The Commissioners could not really have it both ways: if they kept the business firmly in their hands, as Frankland Lewis claimed, allowing their officers to make no suggestions, then Chadwick could hardly be held responsible for the harshness of Poor Law administration. Indeed, as Chadwick pointed out, of all the papers attacked in the House of Commons only one was by him; he had therefore complained to George Lewis how unjust it was that all the unpopularity fell upon himself—to which Lewis had replied that he would get no redress if he applied for it.²

¹ Report of Select Committee on the Andover Union; *P.P.*, 1846, vol. v, p. 1118. He made it clear later that he did not intend "unscrupulous" as a general stricture on Chadwick's conduct, but only as a description of his actions with reference to two documents, one being the Instructions to overseers and churchwardens in March 1836, which contained the disallowance of fees for tolling at pauper funerals. Of this document the Hammonds write: "Chadwick trod on this universal sentiment as if all life had gone from it." (*Age of the Chartists*, p. 75). There seems no reason to doubt Chadwick's statement, however, that the regulation was inserted by Coode into his draft; and that he had urged the Commissioners to obtain statutory authorisation for this and other charges (p. 1281). On plain issues of fact, such as dates and the report of evidence, he was as punctilious as his legal training could make him—and this remains true, even if it be admitted that at times he also showed the lawyer's skill of advocacy in his manipulation of those same facts.

² *Ibid.*, pp. 935-6. Echoing the Parliamentary critics, historians have in general much exaggerated his power to influence the course of Poor Law administration. Thus, it has been asserted that "the history of the Poor Law between 1834 and 1847 is the history of an experiment in centralised adminis-

The report of the Committee was a severe condemnation of the Commissioners' part in the Andover affair. Chadwick read it with a triumph he made no attempt to conceal. He had been the principal actor before the Committee, he reflected, and had repulsed all his assailants in turn; and yet he had brought up none of his reserves, "which are heavier than my adversaries or the public suppose."¹ His momentary elation soon gave way, however, to dark conjecture about the future of the Poor Law Act—and the future of its author—when the Bill for the continuance of the Commission came under discussion in the following session. *The Times*, he noted, was taking the line that the fault lay not with the Commissioners but with the law, which it was impossible for anybody to execute.² Nor, looking more closely at the printed evidence of the Andover inquiry, was he satisfied that it conveyed the right impression. If it blackened the reputation of the Lewises, the character and opinions of Edwin Chadwick did not shine forth in contrast so brightly as he had hoped. But Sir George Grey, the Whig Home Secretary, remained deaf to his pleas that he should be permitted to make a full public statement in self-vindication.³ His fears increased. Was not George Lewis married to Lady Teresa Lister, one of the Villierses, sister of Lord Clarendon and sister-in-law of Lord John Russell, "a lady who invites Senior to the most fashionable parties"?⁴ "In such a country as this, with a position to maintain amongst public men of aristocratical connexions, it is not easy to contend without pecuniary resources to fall back upon," he confided to an American cousin. "And my family drains and various pecuniary losses other than the American have given me more anxiety than the conflict itself. The Government have to decide upon the case, but my chief opponent is the brother-in-law of Lord John Russell, and

tration, and of what that experiment produced in the hard and energetic hands of Chadwick, checked from time to time by wiser colleagues" (J. L. and B. Hammond, *Age of the Chartists*, p. 60). It seems sufficient to comment that this gives a totally unfounded impression that the "experiment" was under his control; that the "colleagues" were, in fact, his superiors; and that they may be acclaimed as "wiser" than he only if their sceptical attitude to his preventive policies is discounted.

¹ E. C. to Sir Charles Shaw, 4 September 1846.

² E. C. to the Earl of Liverpool, 24 August 1846.

³ E. C. to Sir George Grey, 17 January 1847.

⁴ E. C. to W. E. Hickson, n.d.

Lord Clarendon, two Cabinet Ministers and two others. Lord John Russell I have cause most to distrust because he has dealt unjustly towards me, and to condemn the Commissioners will be to condemn the arrangements to which he was a principal party. The public however are I believe with me."¹

Relations at Somerset House were now extremely strained, with Chadwick muttering in his office and the Commissioners caballing against him with the Whigs. A chance encounter in the street with Frankland Lewis led to a scene as violent as that before the Andover Committee; and one, moreover, which did not end in a handshake.² Russell and Clarendon, he was told, had a majority with them in the Cabinet determined to uphold the Commissioners against the report of the Andover Committee;³ and "Lady Teresa was in good spirits."⁴ "If I am not put down," he reflected bitterly, "three carriages must be put down which have been kept up on my labours whilst I have walked."⁵ It was, he felt, quite another Rowland Hill case—but Edwin Chadwick had had three Colonel Maberlys to deal with.⁶ His fears seemed justified when, in the debates on the Poor Law Amendment Bill in June 1847, Lord John Russell came out strongly in support of "the Lewis interest," piling all the discredit which attached to that unpopular measure upon the shoulders of their intriguing Secretary. Vainly Chadwick tried to awaken in his Parliamentary friends a sense of their responsibility towards himself and the reformed Poor Law. They retained an adamant and cheerful confidence that right views would prevail and justice would be done to him without any necessity for putting themselves out to assist that desirable end. "This Government is renowned for its facility in abandoning all measures and all men," Brougham agreed heartily.⁷ "You may see that D'Israeli bantered Lord John about you, but it was all done in a good-humoured jocose tone, and can do you no harm," Poulett Scrope reassured him.⁸ Pleydell Bouverie would have pointed out to Russell the absurdity of blaming Chadwick for irregularities over which as Secretary he had no control—if only he had thought of it at the

¹ E. C. to Andrew Boardman, 3 October 1846.

² E. C. to W. D. Christie, n.d.

⁴ E. C. to W. D. Christie, 7 February 1847.

⁵ E.C. to W. E. Hickson, n.d.

⁷ Lord Brougham to E. C., n.d.

³ E. C. to E. Gulson, n.d.

⁶ E. C. to W. E. Hickson, n.d.

⁸ J. Poulett Scrope to E. C., n.d.

time.¹ George Nicholls wrote a testimonial to his exemplary conduct during the fourteen years they had worked together, and when it was read in the Commons several other gentlemen were moved to add a word or two of approbation.²

All this was highly gratifying, but the Lewis interest remained firmly entrenched, and the Government seemed in no haste to make a public profession of error. In a truculent mood Chadwick began to draw up his Grand Remonstrance. The "Letter of Edwin Chadwick Esq. in vindication of his conduct to the Right Honourable Sir George Grey" (21 June 1847) was a wordy, argumentative, and execrably written paper, with seven appendices, and a mass of facts carefully verified by the evidence of the Assistant Commissioners. It recited the history of his protests against the Commissioners, and outlined the course of preventive administration which he had designed and they had done their best to frustrate. He backed up his own case with a long and lively letter from a former Assistant Commissioner, E. C. Tufnell, who confirmed the correctness of the impression Chadwick had given to the Andover Committee. Chadwick's friends—among them the Bishop of London, the Duke of Richmond, Lord Liverpool, Lord Fortescue, Lord Lansdowne, Lord Ellenborough, Lord Radnor—read the draft of his paper; they read Tufnell's corroborative evidence; they assured him that he had an excellent case—but no two of them were agreed as to the steps he should take to obtain redress. "Such a letter ought to satisfy any *statesman* of his good fortune in having the writer of it at his disposal," said J. S. Mill, "—but whether any of these men have sufficient brains to appreciate brains in another, remains questionable."³ It was now quite clear, in fact, that the jury had pronounced its verdict, though it was in cool defiance of the judge's summing-up. The Government had made up its mind, and decided on its course, and no representations, however authentic, could change its attitude. The debates on the Poor Law Bill had closed without any retraction of the slurs on Chadwick's motives and conduct, and that "mass of error and delusion," Frankland Lewis, was still disseminating the statements which he thought he had

¹ E. Pleydell Bouverie to E.C., 23 May 1847.

² G. Nicholls to E. C., 27 May 1847.

³ J. S. Mill to E. C., n.d.

refuted once and for all before the Andover Committee.¹ Whoever was to form the reconstructed Poor Law Board, it seemed that Edwin Chadwick was not to be of their number, though a friendly Peer might wonder "who upon earth is to rule at Somerset House to be St. Sebastian (who was martyred by being shot at with Pagan arrows) in each house of Parliament?"² To Lord Ellenborough he wrote bitterly, "As the bill at present stands it might be intituled 'An Act to enable the Government to dismiss without reasons assigned, those who otherwise cannot be removed without justification or compensation.'"³ A few days before the Health of Towns Bill, his lifeboat, had foundered in the Commons, as will be described below. The future looked black that July.

It was time, he felt, to unmask his batteries. Hitherto his "Vindication" had circulated only amongst his personal friends, but now he began to prepare it for publication. He even contemplated legal action against his former chiefs, and drew up "Heads of Representations or Articles of Charge against George Cornwall Lewis Esquire and Sir Edmund Head Baronet for acts of Malfeasance of Nonfeasance and Misfeasance in the performance of the duties of their office as Commissioners under the 4th and 5th Will. IV. c. 76 and other Acts for the relief of the poor." But now he ran into difficulties. E. C. Tufnell declined the honour of appearing as a leading witness in any public scandal, and imposed a ban on the publication of his letter. He was too late, however, to prevent Lord Brougham reading extracts from it in the House of Lords. There was an immediate outcry that this was a breach of official confidence. "Can any one help deep disgust," wrote Chadwick to Brougham, "that there should be no feeling of concern, for immense maladministration affecting large masses, positive breaches of law and disastrous misconduct, which ought to have been the subject of judicial inquiry and impeachment, and no feeling for the sacrifice of an able officer like Mr. Parker, but affected horror at an accidental revelation of one part of the misconduct, by the removal of a barrier of privacy or confidentiality which is a misprision and public offence ever to have imposed. The official confidentiality and honour I have only found to come

¹ E. C. to Lord ?, n.d.

² Lord Lovelace to E. C., 2 October 1847.

³ E. C. to Lord Ellenborough, 12 July 1847.

within Dean Swift's simile of conscience as being like a pair of breeches, a garment made to conceal lewdness and nastiness and readily let down for the convenience of either."¹

A truculent civil servant, with a grievance, the makings of a case, and a following in Parliament and the country, could not have been too pleasant a thought for the Whig Government. He would be a nuisance and a bore, if he were not a danger. So it was timely in more than one sense when the Prime Minister decided that Chadwick might profitably occupy himself with an inquiry into the sanitary condition of London. To the reasons for that inquiry, and to Chadwick's other activities in 1847, we must now turn.

Chadwick's great hope at the beginning of the 1847 session was that his ten years of inquiry and recommendation would at last bear legislative fruit. But the Public Health Bill which Lord Morpeth introduced on 30 March² was not Chadwick's Bill, though it displayed extensive evidence of the influence of his reports and memoranda and of the criticism which the sanitary reformers had directed at Lord Lincoln's abortive measure. It was understood—though by no means was it promised by the Government—that he would be offered a place in the new administrative arrangements; and it was mainly with an eye to his own freedom and power of action that he looked over the clauses of Morpeth's Bill. The central authority was to be a "Board of Health and Public Works," composed of five members, three of whom would be paid, with the First Commissioner of Woods and Forests as president. Thus, Lord Lincoln's proposal to bring the public health under the ægis of the Home Secretary was abandoned in favour of machinery modelled on the recently established Railway Board. The lesson of the discredited Poor Law Commission had not yet been digested; the new Board would have a Parliamentary spokesman (even two, as the other unpaid member might well be a Member of Parliament), but the First Commissioner of Woods and Forests, though sitting as president, was in no sense a ministerial head, since he shouldered no more responsibility for policy than any other member of the Board. The weakness and inadequacy of this arrangement were to be sharply revealed when the General Board of Health came later under the

¹ E. C. to Lord Brougham, 13 July 1847.

² *Hansard*, vol. xci, p. 617.

presidency of Lord Seymour. It meant, moreover, the end of Chadwick's visions of himself working the Public Health Act as standing counsel or secretary to a committee of the Privy Council, and with considerable misgivings he looked forward to a Board on which he might find himself in the company of uncongenial fellows. In the local machinery, too, the Bill turned its back on Chadwick's recommendations. In corporate towns the town council would exercise sanitary powers; in non-corporate towns the members of the local authority would be elected by the ratepayers, with the exception of a certain proportion, not to exceed one-third, who would be nominated by the central Board. On the financial arrangements, however, his arguments had had more effect. "There is something in the very sound of 'rates,'" Morpeth declared, "which weighs fearfully in the balance against health, industry, content, and all the virtues." As Chadwick had urged, the burden would be eased and the ratepayers' alarm allayed by granting powers to local authorities to raise loans on the security of the rates, the principal to be recovered from occupiers by instalments spread over thirty years.

The measure was pushed through its Second Reading and the motion for Committee by comfortable Government majorities; and then the critics took command of the field. It was a very vulnerable Bill. Opponents could bang away with the cheering certainty of doing damage to one or other of its rambling outworks. Presently Morpeth found himself engaged in a brisk contest over every clause, occasionally rising to a more extended struggle on the broader ground of general principles, such as the inalienable rights of every middle-class Englishman and the tendency of all Governments to job. From the first the Bill was "the object of singular Protectionist aversion,"¹ and in Committee spokesmen of the landowners strongly opposed a measure which might burden them with taxation for municipal improvements.² "The country was sick of centralisation, of commissions, of preliminary inquiries—of all sorts of jobs," cried Hudson, the Railway King. "The people wanted to be left to manage their own affairs; they did not want Parliament to be so paternal as it wished to be—interfering in everybody's business, and, like all who so interfered, not doing

¹ *Times*, 3 July 1847.

² *Hansard*, vol. xciii, p. 716 (Divett), p. 717 (Buck), p. 728 (Newdegate).

its own well."¹ It was the crude "Hands off!" of the self-sufficient capitalist; and it was strengthened by an older argument from the eighteenth century when Colonel Sibthorp exclaimed against the appointment of Commissioners under Government patronage. "He objected also to their being salaried, entertaining a strong feeling that if they had not patriotism enough to give their services for the good of their country, they were utterly unworthy of so important a trust. He objected also to the appointment of three inspectors. These things led to a great deal of bribery of a peculiar kind; and he had served long enough in that House to be extremely jealous of all Governments, whether Whig or Tory. They all could, and did, do a great deal behind the scenes; and there was a great deal of secret service money spent."²

In the country at large the Bill caused little noise. Thirty-two thousand signed petitions in its support, and 287 sent resolutions against it; but apart from this minority the public did not seem greatly concerned about the defence of its own health. Chadwick sent some notes on the Bill by Southwood Smith to a friendly editor, with the tart comment "Admitting the justice of the Rajah of Suttara's claim and of the Portuguese and of delinquents, I must say that the condition of the population would seem to have a right of precedence."³ In the hope of getting the measure through before the end of the session, the Metropolitan Sanitary Association urged Morpeth to make concessions. London was dropped from the Bill; the element of nomination in the local Commissions also disappeared; it was agreed, to pacify the water interests, that local authorities should contract for their supplies with existing companies. The number of Commissioners on the central Board was cut to four, of whom one only was to be paid. But by 8 July it was clear that Morpeth's concessions had not gained their object of securing an easy passage for the Bill. Whatever had been gained in postponing the clash with metropolitan interests was lost in the feeling which the exception aroused in the Press and the provincial representatives, who saw in it one more instance of the influence of the City Corporation and the phalanx of sixteen metropolitan M.P.s. Nobody was greatly surprised when Lord John Russell announced that the measure could

¹ *Hansard*, vol. xciii, p. 748, 18 June 1847. ² *Ibid.*, p. 727, 18 June 1847.

³ E. C. to ? (probably *The Times*), 7 July 1847.

not be proceeded with during the present session; and nobody could disagree with his verdict that this was partly due to the importance of the subject, partly to the defective framing of the Bill—but “another cause may be, that unnecessary opposition has been made for the purpose of delay.”¹

One point above all had impressed Chadwick as he read the Bill after it had passed the Committee stage. Only one paid Commissioner, and that one at £1,000 a year! Was this the value the Government set upon the execution of the new measure? Even the extreme Radical papers, such as the *Weekly Dispatch*, scoffed at the cry of patronage in this connection.² It would have been worth several salaries to have secured the services of Southwood Smith, with his literary skill, his special knowledge of the medical aspects of the subject, and his popularity with the Press and the medical profession.³ If he himself accepted the post, he must sacrifice £200 a year of his present salary—though three members of the Government, to induce him to withhold his remonstrances about the Poor Law, had assured him that his future position would be a change for the better. “Look at my present position!” he wrote heatedly to Nassau Senior. “After every appeal of mine has been affirmed: every remonstrance made sustained against adverse inclinations: I who have had no charges preferred against me, no hearing and no public condemnation by impartial members, I am proposed to be in effect removed arbitrarily to a lower place in emolument which all who believe myself to be contemplated regard as a public and intentional slight.” And he could draw no comfort from the hope that the position offered would improve in time. Had he not been told, on the word of a Prime Minister and a gentleman, as the condition on which he accepted the office of secretary to the Poor Law Commission, that he would have the status of a fourth Commissioner? He would decline the paid Commissionership with its derogatory salary, he told Senior, but he would put in a claim for an unpaid seat at the new Board, where he would continue to give such gratuitous service as he had all along given to sanitary measures. At the same time he would claim to be retained at the

¹ *Hansard*, vol. xciv, p. 25, 8 July 1847.

² E. C. to Joseph Hume, 5 July 1847.

³ E. C. to Nassau Senior, 7 July 1847.

Poor Law Board, on the grounds that his remonstrances had been upheld by the Government and the Law Officers, and that his were the best experience and information available.¹ Chadwick liked to think that the way he had managed the two Bills, the Poor Law and the Health of Towns, did Russell some damage in his constituency, the City of London, in the 1847 election. Even Richard Lambert Jones, an old adversary on the City Commission of Sewers, stopped him in the street one day to tell him that the Corporation considered he was being sacrificed for having performed his duty to the public.²

On 8 July the Public Health Bill was thrown out, and Chadwick with it. Somerset House had closed its doors behind him. He faced a period of twelve lean months before Morpeth's revised Bill could become law. Already he had warned his American dependants that they could expect no help in the coming year, when he was summoned to an interview with the Prime Minister. He was to be put in charge of a Commission of Inquiry, Russell told him, not into the sanitary ills of the capital, which had been sufficiently demonstrated, but into the specific remedies which might be applied to correct them. Possibly the thought of Chadwick, with his indiscreet pen, at a loose end for twelve months was too much for a Cabinet whose part in the Andover affair could not be too kindly scrutinised. But in any event the problem of metropolitan government, at the sight of which Morpeth had “struck his flag and cut his stick,”³ loomed blackly on the legislative horizon of the coming session; and Chadwick, with his zest for investigation and his unrivalled grasp of sanitary and administrative principles, was the only man who, in the space of a few months, could draw up the indictment of the present régime and indicate the lines of future reform.

But there was a more powerful reason. In the last few months the knowledge of the sanitary reformer had taken on a heightened value. In the hot season of 1845 cholera had broken out in Kabul. Sweeping through Afghanistan and the north-west provinces of India, it advanced into Persia and Asiatic Turkey, where it was halted by the winter of 1846–7. In the spring it was again on the

¹ E. C. to Nassau Senior, 7 July 1847.

² E. C. to Lord Ebrington, 20 July 1847.

³ Roebuck; *Hansard*, vol. xciii, p. 732, 18 June 1847.

march, striking south into Arabia and Egypt, north into the lands round the Caspian. The northern invasion divided, one wing thrusting through European Russia into Finland and Sweden, the other along the lower Danube into Austria and Germany. In September 1848 the cholera was at Hamburg, whence it took ship to Edinburgh, appearing unmistakably in the Scottish capital at the beginning of October 1848. More than twelve months before that date cases of indigenous fever were being scrutinised anxiously in England for the characteristic symptoms of this exotic disease. What put a wholesome fear of filth into the governing classes was the spectacle of the unhastening, unchecked advance of this epidemic, traversing thousands of miles at the heels of the overland caravans and spreading westwards along the great interior waterways of Russia. For this was the second time in one generation that cholera had swept through Europe; and not since the English Sweat landed with Henry Tudor at Milford Haven in August 1485 and, as Polydore Vergil describes, journeyed to London as his camp follower, had Britain experienced so novel and so terrifying an epidemic as the Asiatic Cholera which struck down its first victim in Sunderland in October 1831. A few months of cholera in 1831-2 caused more alarm than centuries of home-bred typhus, which killed its thousands yearly in the slums of the industrial towns. It was the dramatic suddenness of the cholera attack which spread terror. In the space of a few hours the sufferer might be lying pulseless and blue, his body shaken by repeated vomiting and purging, his limbs twisted with cramp; and in the existing state of medical knowledge one half of those who passed into the blue, or collapse, stage of the disease were doomed. "Bleeding, brandy, opium, calomel, ammonia, quinine, croton-oil, cold water, the warm bath, the cold effusion, all varieties and contrarieties of treatment possible, have been employed alike in vain."¹ For this reason, though the influenza epidemic of 1847 killed more of the middle and upper classes than the cholera of 1848-9, it aroused nothing like the same amount of apprehension. Nor was this all. Typhus was a poor man's disease, the louse being no longer seen in polite society. At the end of the eighteenth century a respectable

¹ *Second Report of the Metropolitan Sanitary Commission*, p. 22; *P.P.*, 1847-8, vol. xxxii, p. 253.

middle-class physician was noting complacently that fever was rare in Liverpool; though, to be sure, Dr. Currie was treating a steady average of three thousand typhus cases a year at his dispensary. But the comma bacillus was a social climber; excreted by some lowly sufferer in Fore Street, Lambeth, or Hairbrain Court, it might penetrate the half-hearted filter defences of the water companies to poison his betters in the broad squares of the West End.

Assured of the backing of an apprehensive Government, therefore, Chadwick cast an imperial eye over the vast, disorderly province of the metropolis. Outside the walls of the City, London in 1847 was a tangle of overlapping jurisdictions and conflicting authorities. Some three hundred local bodies—including seven Commissions of Sewers, 172 vestries, and nearly a hundred paving, lighting, and cleansing boards—jostled and frustrated each other, each clinging with determination to its minute segment of power and dignity, with the object, it would seem, rather of keeping out other authorities than of conferring benefit on the population beneath its care. In the parish of St. Pancras alone there were sixteen separate Paving Boards, acting under twenty-nine Acts of Parliament. While the drainage and surface cleansing of London was thus minutely subdivided between a host of public authorities, other vital sanitary services were shared by eight joint stock cemeteries and nine water companies. The Royal Commission on Municipal Corporations, which dealt with the capital in its second report in 1837, had concluded that London must have a unified government, but it had not ventured to decide whether it should take the form of a Government Commission or of a newly created municipality. If the Government ever really intended to take action on this report, the edge of their resolve was turned by the hard core of vested interests in the City. The chaos remained, and grew worse year by year, a challenge to all Chadwick's principles of administrative consolidation. For the remaining years of his official career the problems of London's drainage, water supply, and burial services were to occupy a major part of his energies.

There was little attempt by the Government to conceal the real purpose of the investigation on which he was now engaged. It was to convict the works and administration of the Sewers Com-

missioners, and to furnish arguments which might be used to justify to the public the resumption by the Crown of the powers they had so ineffectively wielded. Lord Lincoln and Sir James Graham had earlier taken tentative steps towards superseding the Commissions, but had drawn back—apparently, Chadwick observed, for fear of offending the Commissioners. "Something must be said publicly," he wrote sharply to Morpeth, "of the state of mind which inflicts disease and death extensively on thousands out of deference to conventional feelings of individuals, which feelings are most improper for those individuals to entertain."¹ For the Sewers Commissions stood plainly condemned by Chadwick's Sanitary Report of 1842 and by the Health of Towns Commission of 1844-5; and Chadwick fretted at the needless delay which the Government's caution imposed upon him. Within a fortnight of the interview with Russell, he submitted to Morpeth some "Memoranda of results in relation to the Metropolis, promised by E. Chadwick," a paper which, in its reckoning of sanitary profits and economies, struck the confident note of the commercial prospectus. Three districts might in future be drained for the cost of two, two courts and two houses at the cost of one hitherto drained by private builders—provided that sound administrative arrangements were adopted. The secret lay in the consolidation of the whole of the natural drainage area of London under a single Commission of Sewers. Over £60,000 a year might thereby be saved on establishment charges, on the expense of rate collecting, and on the outlay for Commissioners' dinners. Consolidate at once, without waiting for the results of the new inquiry, Chadwick urged on Russell and Morpeth. If the Sewers Commissions remained in their present hands, the doomed Commissioners would resist to the utmost of their power. The more enlightened of the surveyors had already come into conflict with their reactionary masters; John Roe, for example, whose flushing machine had been coldly received by the Holborn and Finsbury Commissioners, and that "extraordinary man," John Phillips, the self-educated journeyman bricklayer who had risen to the surveyorship of the Westminster division and had shown up the defects of a system of sewerage pronounced perfect by the President of the Association of Civil Engineers. These experienced officers

¹ E. C. to Lord Morpeth, 5 August 1847.

were agreed that it would be well worth suspending all the drainage works now under construction for the sake of a complete survey, and they assured Chadwick that if they were emancipated and secured against dismissal they would willingly co-operate with the Commission of Inquiry in the preparation of remedial measures.¹

Morpeth approved highly of Chadwick's papers, but Russell was lukewarm; and a strong letter from the Lord Chancellor, which Morpeth would show to Chadwick only in abstract, put an end to his hopes of a *coup d'état*.² Consolidation must be postponed until the investigation was completed; and Chadwick foresaw that whilst the Sewers Commissioners would not obstruct the inquiry so openly as to expose themselves to a supersedeas, there would be "no work with a will."³

Besides Chadwick and Southwood Smith, the Commission of Inquiry included Lord Robert Grosvenor, who was Russell's choice, and Richard Lambert Jones, representing the interests of the City of London; while Chadwick had made sure of a majority in favour of progressive measures by insisting on the nomination of Professor Owen, "the Cuvier of our day."⁴ Russell had wanted to appoint the son of Sir John Bowring as assistant secretary to the Commission. Chadwick retorted bluntly that it would look like a political job, and instead secured the post for Henry Austin, a young engineer who had carried out some pioneer sanitary work of considerable promise.⁵ Early in September 1847 the Commission moved into the rooms in Gwydyr House where the Health of Towns inquiry had met two years before. "I have seen enough and supped enough of horrors not to avoid more except where it may be absolutely necessary," Chadwick told Morpeth at the outset of his third sanitary expedition. "A man who has had two fevers in the sanitary cause, may be placed on the footing of an officer in the Army who has led two forlorn hopes and is excused a third. I certainly shall put forward younger men for the enterprise."⁶ Within a few days, however, he was

¹ E. C. to Russell, 8 August 1847.

² Morpeth to E. C., 9 August 1847; E. C. to Morpeth, 11 August 1847; Morpeth to E. C., 19 August 1847.

³ E. C. to Morpeth, 19 August 1847. ⁴ E. C. to Russell, 4 August 1847.

⁵ E. C. to Morpeth, 24 July 1847; to Sir George Grey, 25 August 1847.

⁶ E. C. to Morpeth, 11 September 1847.

revisiting the lower districts of Bermondsey in Professor Owen's company.¹

As early as possible Chadwick withdrew, with his two allies, Owen and Southwood Smith, into the seclusion of a sub-committee on the cholera, and the main propositions of the reports were hammered out in this congenial atmosphere, removed from the "Parliamentary influences, fidgets, and groundless alarms" of Lord Robert Grosvenor,² and Jones's continual insistence on the rights and dignity of the Sewers Commissions. To save time and avert opposition from the City, they confined their attention to the seven districts for which the Crown was responsible, and the attack on the City sewers, which were no better than those under the other Commissions, was postponed. The first report of the Commission of Inquiry was signed on 20 November.³ At their opening meeting Professor Owen had informed them that in the medical schools it was strongly believed that a cholera epidemic was impending.⁴ On that grim note of warning the report opened. If the cholera came, were the defences of London any stronger now than in 1831? A few of the old open sewers had been arched over, some additional lines of common sewer laid down; but most of the new sewers were not supplied with a sufficient sweep of water to carry off their contents. The improvements made in the past sixteen years were, in fact, negligible. As Chadwick had already written to Russell: "We have compared the state of all the districts most severely visited by the Cholera, and shewn that there has been no material improvement in their sanitary condition. It is as I think, proved, that in the majority of the districts the Commissions are positively not to be entrusted with the cleansing of a ditch, and moreover that the districts, even for that purpose, interfere with each other."⁵ London was wide open to the cholera in 1847 as in 1831. But, thought the Commissioners, the London of 1847 had one great advantage over that of 1831. It was now known how the cholera was generated, and how it might be prevented. Medical observers who had watched the last epidemic had shown that generally it followed the track of rivers and water-courses; but the most deadly explosions had

¹ E. C. to John Forster, 1847. ² E. C. to Morpeth, 18 November 1847.

³ P.P., 1847-8, vol. xxxii, pp. 1, 57. ⁴ E. C. to Russell, 6 October 1847.

⁵ E. C. to Russell, 10 November 1847.

taken place near some extraordinary accumulation of filth, the mouth of a sewer, a "bone vessel" laden with manure, a fever nest like Three Tuns Court. It was the lower districts of the towns which usually harboured such accumulations; but impure air could not be fenced in, and the deaths of great numbers of respectable artisans and shopkeepers proved that a contaminated atmosphere was an "incomparably more powerful predisponent" to the disease than extreme poverty and the lack of adequate food. The conclusion was inescapable. There was only one safeguard: "that safeguard consists in sanitary arrangements."¹

Could the cleansing of London be safely left, however, in the hands of the existing Commissions of Sewers? The chief preventive measure must be the flushing of the sewers; only one district, Holborn and Finsbury, had flushing machinery in systematic use, though its advantages had been demonstrated years before. It would be necessary to divert upper streams under one Commission to cleanse the sewers of lower levels lying under a different jurisdiction; such collective action the present Commissioners had shown themselves incapable of understanding or executing. The works they had built were a standing memorial to their ignorance and incompetence. Private Acts to confer increased powers had been obtained by two Commissions; Bills were now in agitation by two more—and not one of them contained provisions for the supplies of water without which the sewers could not act properly. The clerk to the Surrey and Kent Commission, after confessing that few house drains were joined to their new main sewers because of the offensive effluvia which were thrown back through the privies and water-closets, went on to reveal that his Commission now proposed to spend £100,000 on extending the same system. As Chadwick commented in a confidential report to Lord Robert Grosvenor, "No sane person would go on, so expending their own money as these same commissioners are now going on spending the money of others."²

¹ *First Report of the Metropolitan Sanitary Commission*, p. 33.

² "Metropolitan Special Commission. Notes on the Evidence examined," MS., 7 October 1847.

"The sewers establishments were mere 'Castles of Indolence,'" he wrote later (to Frederick Byng, 11 September 1848). "I scarcely know of any old Government offices which were worse or so bad. Now and then a Court with about the degree of business to give the excitement of Sessions work for the relief

The cholera and Chadwick's revelations were together too much for the Law Officers, and within a few days of the signing of the report they concurred in his proposal to recall the Commissions and re-issue them to the same individuals for each district. Chadwick asked for a small Commission, fitted by special knowledge and experience to supervise the paid officers in the execution of a comprehensive drainage scheme. All that was really wanted, he thought, was a sufficient number of Commissioners to supply a working quorum of six; and the public should see from the character of the appointments that scientific and medical skill was being brought to bear on the problems of metropolitan drainage. The central Government had long been accustomed to intervene in the administration of London, stepping into the breach left by the absence of organs of municipal government. The police, roads, cemeteries, and markets of the capital had all in turn received special attention from Parliament, while plans for metropolitan improvement had been considered by a Select Committee in 1838 and a Commission in 1844. Chadwick's plans for London were in the direct line of this tradition. The model of government he advised was the one he had recommended consistently for local sanitary administration since 1842: government by commission, efficient because it was composed of selected brains, responsible because its powers were defined by Act of Parliament and its conduct came under the jealous scrutiny of the legislature.

Over a thousand Commissioners were superseded by the writs of November and December 1847,¹ and their powers transferred

of a Country Squire; now and then a new sewer to be considered, on the report of the Surveyor; Chief Clerks with good Salaries, going there in the middle of the day, hearing a complaint or two, reading a newspaper for an hour or two, and then going home to his Country house, or to some other place of emolument; Clerks of the works seeing to the performance of half labour by labourers with extra pay; the Surveyor now and then seeing to the work, and hearing the reports of the Clerk of the Works; but leaving early to amuse himself with a farm or to attend to any private professional engagement which might offer itself."

¹ The numbers were as follows: Westminster and part of Middlesex, 240; Holborn and Finsbury, 150; Tower Hamlets, 179; Poplar and Blackwell, 67; Surrey and Kent, 280; Greenwich, 116; St. Katherine's-by-the-Tower, 33.

The first six of these were superseded on 30 November 1847, the last on 4 December.

to a select body of twenty-three, including seven Members of Parliament, three doctors, two clergymen, two lawyers, the proprietor of *The Times*, a geologist, a physiologist—and, despite all Chadwick had written, four of the discredited Sewers Commissioners.¹ A dozen or more of these were personal friends of Chadwick; but the new Commission, small as it was in comparison with its predecessors, was larger than he would have wished. And he soon made it plain that he considered it was too large by just the number of those who opposed his views. Moreover, the jurisdiction of this consolidated Commission halted at the walls of the City. It was indeed no more than an interim solution, into which the Government had been driven more by the transient threat of the cholera than by any consideration of the enduring problems of London's sanitary administration. Chadwick was presently manœuvring to replace this temporary body by a permanent executive modelled closer to his liking. Unsatisfactory though he thought it, however, he had good reason to congratulate himself; in the Metropolitan Commission of Sewers London, for the first time in its history, had an administrative body charged with the responsibility of planning and constructing public works for the whole metropolitan area outside the City.

¹ The Commissioners were: Lord Morpeth, Lord Ashley, Lord Ebrington, the Hon. Frederick Byng, the Dean of Westminster, Sir James Clark, Sir Edward Buxton, Sir Henry de la Beche, Joseph Hume, John Walter, R. A. Slaney, William Broderip, John Bullar, Professor Owen, Dr. Arnott, Dr. Southwood Smith, the Rev. William Stone, John Bidwell, Robert Hutton, Thomas Puckle, R. L. Jones, John Leslie, and Edwin Chadwick.

CHAPTER VIII

PUBLIC HEALTH ACT, 1848

LORD MORPETH introduced his revised Bill on 10 February 1848. Once again Chadwick's hopes were at the mercy of the "winds and waves of speech in the house."¹ Would their lumbering measure, with its 150 clauses, go to pieces again, as in the previous year, and be given up, an abandoned wreck, when the session came to an end? The Bill was, he knew, in the hands of a man who wished it well. As a Howard, the heir to the sixth Earl of Carlisle, Lord Morpeth was a power among the Whigs. He had shown himself a sincere and courageous friend to progressive movements—as Chief Secretary in Ireland encouraging agrarian reform, as a visitor to the United States startling Bostonians by attending an Anti-slavery Fair, as a Whig grandee in England giving a lead to men of rank by supporting mechanics' institutes and the Health of Towns Association. To the Public Health movement Morpeth brought the prestige of his family name, and the personal popularity won by his characteristic charm and transparent goodness of heart. He was, says Harriet Martineau, "the best and most beloved man in the company of statesmen of his day and generation."² All this was to the good; but in his private thoughts Chadwick wondered whether Lord Morpeth's resolution was firm enough, whether his temper was not too equable. Was it sufficient in the Parliamentary leader of the sanitary agitation to possess moral idealism, a gracious sympathy of manner, an exquisite politeness? One could be too polite to the vested interests which cast their shadows over the health of millions; one could be too accommodating to slum landlords, and listen too patiently to the defenders of local self-government. Perhaps Morpeth earned at too great a price Disraeli's commendation that he was one of the most popular men in the House and

¹ E. C. to ? , n.d.

² *Biographical Sketches*, 4th ed., 1876, p. 142.

in the country. For his part Morpeth, the politician, found Chadwick, the administrative theorist, too punctilious and unbending in his views. "You must not suspect me of any disposition to undervalue your advice or to slight your counsels," he assured Chadwick, "but as I have to make things *go down* with Senates, Boards, and Bodies of men, there must be often a want of the identity of proceedings which otherwise I might be glad to exhibit. . . . I hope we shall keep all things smooth, which is not only pleasanter, but at the present constitutes our highest prudence."¹

As in 1847, the Bill provided for a central Board of Health with five members, two of whom were to be paid, under the presidency of a responsible member of the Government. On the petition of one-fiftieth of the rated inhabitants the General Board would have powers to introduce the machinery of local sanitary administration into a district, and to influence its working by the advice and surveillance of a number of Superintending Inspectors. The amount of central interference, Morpeth explained reassuringly, "was really at present confined to a very few items";² the General Board would be authorised to advise the original formation of the district, to arbitrate on questions referred to them by the Local Boards, to enforce a uniform procedure in certain matters where such uniformity was desirable, to audit the accounts of the local authorities, to give or withhold their sanction to the execution of local sanitary schemes. A Local Board would be established by an Order in Council or a Provisional Order, which would prescribe the number of members the Board should have. In a corporate town the municipal council would select the Board from amongst its own members; in non-corporate towns the Board of Health would be elected by a system of plural voting similar to that in use for the election of a Poor Law Guardians. The powers of Local Boards fell into two classes: it was imperative upon them to compel owners or occupiers to provide house drains, to ensure a constant water supply (by the compulsory purchase of existing waterworks if necessary), and to appoint a surveyor and an inspector of nuisances; they could also exercise permissive powers to appoint an officer of health, to reconstruct the sewers, to pave

¹ Morpeth to E. C., 7 June 1848.

² *Hansard*, vol. xcvi, p. 737, 5 May 1848.

streets, to make regulations for the disposal of filth and refuse, to provide places for public recreation. Neither Scotland nor Ireland was covered by the Bill; and the problem of London and its hundred Local Acts was reserved for a separate measure.

It was by no means the best Bill that could be devised, thought Chadwick as he looked over its provisions—but it was the best they were likely to get.¹ The machinery of central control was certainly not of Chadwick's planning. "I must do the best I can and how I can," he told his friends resignedly, "—the Board is an exceedingly hazardous affair but there seems to be no other chance."² Presently, however, Morpeth was wavering before the critics who condemned the Bill as a Government job, to create new Commissioners and a numberless host of Inspectors in the face of a Budget deficiency of two or three millions, and there was talk of entrusting the measure to a Board of unpaid Commissioners. "That of course excludes those who cannot live on air, or who like myself have no private fortune."³ Obviously the proposal was aimed at himself, probably out of jealousy at the C.B. with which the Prince Consort had recently honoured him.⁴ It reflected the ignorance of men like that talkative eccentric, Colonel Sibthorp, who had once declared that the whole sanitary service was unnecessary, and that half a crown a day would be sufficient remuneration for an Inspector, who would be expected to superintend a novel type of engineering works—three to ten guineas a day being the usual payment to engineers in private employment.⁵ Once again Chadwick began to fear that his proposals would be accepted but their author rejected. He would be glad to be paid piece work to execute the Act on the principle of "no cure, no pay," he told Joseph Hume, urging him to raise his voice against such cant and humbug.⁶ The following day Hume obtained the consent of the House to the appointment of a single paid Commissioner, but Chadwick still retained a forbid-

¹ E. C. to Dr. P. H. Holland, 29 February 1848. He told Lord Campbell, 26 June 1848, "I have never been able to take any part in the framework or details of the Bill since the first meeting at Lord Morpeth's: I do not feel myself responsible for it, and do not feel confident as to its working other than as a commencement."

² E. C. to W. E. Hickson, 4 March 1848.

³ E. C. to ?, n.d. ⁴ E. C. to W. E. Hickson, 9 May 1848.

⁵ E. C. to Morpeth, 17 May 1848. ⁶ E. C. to Joseph Hume, 17 May 1848.

ding picture of himself sitting as a resented and unhonoured figure at the bottom of a Board of titled amateurs. He must be assured a position where he could initiate measures and defend them, he told R. A. Slaney; a Cabinet Minister or a recognised official chief he would not mind, but he had strong objections to acting under any honorary Commissioners whatsoever.¹ What honorary Commissioners could be found whose special qualifications would give public confidence? Apart from Viscount Ebrington, who was there in Parliament who could assist the measure? Did not all experience show that unpaid service was always the most extravagant? To cut the Bill free of the dead wood of patronage appointments, he urged Russell and Morpeth to consider whether even at this stage the measure might not be reshaped, and the dangerous expedient of a Board dropped in favour of the machinery he had outlined in 1844, with Edwin Chadwick acting as paid secretary to the President of the Council. Such an arrangement "would follow in a beaten course," since the Privy Council were already invested with functions relating to the public health; and "if the measure succeed, as it will succeed, if fair play be given to it, the expansion of powers and extension to other parts of the country might, I apprehend, be most readily given to it under such auspices."²

In Committee Morpeth's original proposal was eventually whittled down to a Commission of three, one only to be paid, under the presidency of the First Commissioner of Woods and Forests. Though he regretted that "the principle of single seatedness"³ had not been adopted, Chadwick found some satisfaction in the small size of the Board; unless there were very special qualifications of knowledge and zeal, he had told Morpeth, every additional member of a Board was an additional trouble to inform and keep right.⁴ It is noteworthy that once again, as in the debates of 1847, the principle of ministerial responsibility for the policy of the new department was not clearly envisaged by the Government, nor by any of the critics, friendly or hostile, in the House, with the exception of Lord Lincoln, who continued to urge that public health measures should be put under the jurisdiction of the Home Secretary. This solution Chadwick rejected,

¹ E. C. to R. A. Slaney, 16 May 1848. ² E. C. to Russell, 14 May 1848.

³ E. C. to W. E. Hickson, 4 March 1848. ⁴ E. C. to Morpeth, n.d.

partly because in his view sanitary administration should be kept free from the party influences introduced by a changing political head, partly because public health measures were too important to receive merely the fractional attention of an already overburdened Minister—but chiefly, it would appear, because he judged the question by one sovereign test, the amount of authority it would ensure to himself.

In its arrangements for local administration, also, the Government Bill departed from Chadwick's original recommendations. "I have already remonstrated on the new powers to be given to the town councils which I entirely distrust," he told the Bishop of London. "... What I apprehend is, that they will go into all kinds of waste, and then it will be said, how much has been spent for Sanitary measures, and how ineffective they have been."¹ The main bulwark in the Bill against a flood of local jobbery was the provision that any proposal by the local authorities to spread sanitary charges over a period of time must receive the sanction of the General Board. This safeguard, "so important a key point for the central control,"² was struck out, without discussion, by the Commons, so permitting the Local Boards, freed from the restraining hand of the central department, to embark upon all manner of extravagant schemes, to be paid for by such instalments and within such period as they themselves should appoint. The local officers, the surveyor and officer of health, were guaranteed some security of tenure by the provision that the approval of the General Board must be given for their dismissal; but since their remuneration and conditions of service were left to the local authority, their independence of view and action were far from assured. Central control over the officers and finances of the Local Boards was in fact clipped so close by the Commons that at one stage Colonel Sibthorp was under the gratified illusion that the Government had very nearly abandoned its plan of "centralisation."³ Chadwick now pinned his hopes on the Lords to save the Bill from complete futility.

The debates in the Commons had revealed how much the public health reformers had yet to do to enlighten the ruling

¹ E. C. to Bishop of London, 16 June 1848.

² E. C. to Morpeth, 3 June 1848.

³ *Hansard*, vol. xcvi, p. 872, 11 May 1848.

classes and shake them out of their obstinate self-satisfaction. Many Members refused to recognise in Chadwick's sombre picture the visage of their own towns. They deplored the "anonymous slanders" on one place after another, put out by the Health of Towns Association, and rejected indignantly the unsavoury descriptions of the home life of the poor as "an unfounded calumny upon the meritorious classes to which those statements referred."¹ Urquhart could not believe that Stafford was unhealthy.² Divett declared that the Commissioners in Exeter had laid out £100,000 in improving the city, and the place had never had less sickness.³ Hudson, who had lived thirty-three years in York, had canvassed the electors' houses six times, and had gone among the lower classes as a Methodist exhorter, had seen nothing approaching the scenes described in the report put out by the York Sanitary Committee.⁴ Yet—Morpeth cited a petition from Stafford, referring to the high mortality in the town, and signed by all but one of the medical men, all the clergy and ministers of the different denominations, the late mayor, a majority of the aldermen, and a large proportion of the town council;⁵ Lord Ebrington, recently returned from Exeter, had attended a meeting under the chairmanship of the mayor where citizens had complained warmly about the lack of drains and pure water;⁶ and not a medical man in York impugned the report which Hudson so contemptuously rejected.⁷ So, in the Commons, Members asserted and denied as their limited observation and emotional prepossessions taught them. Sanitary science lacked as yet the well-knit logic of established knowledge, and in that unfenced country of the half-known and the merely surmised, opinion could canter on a free rein. Nothing caused so much confusion, for example, as the reformers' well-meant attempt to demonstrate a firm correlation between disease and the offensive exhalations of organic decay; for, as the bacteriologists were later to show, the nexus of cause and effect did not lie here. The connection between noxious emanations and the itch was much more pronounced, as Snow observed, but because men knew

¹ *Hansard*, vol. xcvi, p. 773, 8 March 1848 (Charles Pearson).

² *Ibid.*, p. 716, 5 May 1848.

³ *Ibid.*, p. 1174, 18 May 1848.

⁴ *Ibid.*, vol. xcvi, p. 1284, 6 July 1847.

⁵ *Ibid.*, vol. xcvi, p. 734, 5 May 1848.

⁶ *Ibid.*, p. 727, 5 May 1848.

⁷ *Ibid.*, vol. xcvi, p. 1283, 6 July 1847.

what caused the itch, they did not fall into the error of laying it to the account of every unpleasant smell. While some Members, therefore, could point to the warning of undrained districts where the inhabitants had been decimated by an explosion of fever, others could show cheerfully insanitary populations which for generations had been drinking unfiltered water and piling ordure round their doors without any catastrophic retribution.¹ Chadwick, who had been twice attacked, and Southwood Smith, who had had three bouts of typhus, were convinced of the danger; and when he heard remarks that the danger was exaggerated, Chadwick would recall the honourable list of casualties in the service—the Roman Catholic priests who had visited the Liverpool Irish; the doctors, Lynch and Mitchell and Dyce Guthrie; and the Health of Towns Commissioners who had retched on the corners of dark back streets, Playfair, Smith of Deanston, and Sir Henry de la Beche.² Here, he felt, in the deaths and physical discomfort of healthy, well-fed members of the middle classes was evidence to satisfy all who were not blinded by self-interest.

Openly or under cover of such arguments, the voices of threatened interests were raised against the Bill. A smoke-suppression clause roused the manufacturers; the proposal to extend municipal boundaries to take in country districts stirred up the representatives of the agricultural areas. Divett objected to the transfer to the local Boards of private undertakings for the supply of gas and water; if Parliament fixed the charges, these matters were best left in the hands of private bodies. He detected in the Bill the hand of Chadwick, who would gain under it a position of power and importance, such as he had already secured for himself at the Commission of Sewers.³ This was not the only personal attack endured by Chadwick in the course of the debates.⁴ Some speakers, he believed, were paying off old Poor

¹ See, for example, a letter on sanitary statistics in the *Morning Chronicle*, 3 April 1848. In 1832 Shoreditch, "a district sacred to Cloacina," was most exempt from cholera, having one case per 1,203 inhabitants; while the City, the best drained district, had one in 155. If this were a fact, concluded the writer, it was an argument for abolishing sewerage altogether.

² E. C. to Morpeth, 30 June 1847.

³ *Hansard*, vol. xcvi, p. 725, 5 May 1848.

⁴ He appealed to Lord Lincoln to use his influence to discountenance this practice of attacking civil servants, "the absent, and really defenceless." "For years Mr. Stephen was attacked for Colonial measures; latterly Mr.

Law scores; Tatton Egerton, for example, whose practice as owner of a close parish of pulling down cottages and drawing labour from other parishes had been condemned in Chadwick's evidence before the Settlement Committee in 1847, and who now declared that the appointment of "a certain individual" would be distasteful to the manufacturing districts. The answer to this, Chadwick told Russell, was that from Leeds, Liverpool, Manchester, Bolton, Lancaster, Warrington, and elsewhere, appeals had come to him for advice and assistance.¹

Provincial jealousy flared up when it was seen that London was escaping again, as it had escaped the Municipal Reform Act. Why should London be exempt, demanded Colonel Sibthorp, in preference to his own constituency, Lincoln, which was clean enough, and had not a poor man in it?² "It was in London, in stinking London, in filthy London, that sanitary measures should begin," cried Wakley, the editor of the *Lancet*, adding his grumble against the "soup influence" of that "nasty turtle-eating corporation."³ "Help I pray you against Banks!" wrote Chadwick to *The Times* correspondent, the Rev. S. G. Osborne. "He wishes to do nothing in sanitary measures until the Metropolis is included but he is most zealous he says for them. Cannot you now press forward the claims of the Dorsetshire villages, and of his own cottages to his sanitary zeal. Pray give him a sermon on the times from Psalm 74 v. 21 prayer book version: 'All the earth is full of cruel habitations,' but let your voice of exhortation be raised soon."⁴

Most significant, because it was a direct confrontation of the fundamental principle of the Bill, most powerful, because it was backed by many of the municipalities, was the attack on "that mode of foreign government which was known by the name of

Trevelyan for Irish measures, and from the commencement of the Poor Law Amendment Act, I, for measures which were the work of another Department." (8 May 1848). Lincoln replied (9 May 1848): "I consider attacks upon any Gentleman employed by a Responsible Minister of the Crown unjustifiable. If the Bill be yours, it has been adopted by Lord Morpeth—he will reap all the merit if it succeed and upon him must fall the blame if it fails—this in my opinion is the only safe Parliamentary view of any question."

¹ E. C. to Russell, 14 May 1848.

² *Hansard*, vol. xcvi, p. 711, 5 May 1848.

³ *Ibid.*, vol. xcvi, p. 414, 10 February 1848.

⁴ E. C. to the Rev. S. G. Osborne, 6 May 1848.

centralisation."¹ It had long been the pride of the country that the Government had little to do in the management of internal affairs, declared Urquhart, the Member for Stafford. If the country was in a sink of filth, it was because the House had passed laws affecting the labour and industry of the population. The Common Law provided ample means for putting down all nuisances; if anything more were required, it should not take the form of this "clumsy, encumbered, and almost unintelligible Bill" which superseded the functions of Parliament by enabling another body to set aside laws and impose taxation; a simple and facile measure might grant to municipal authorities the powers they needed and subject them to penalties if they neglected to put them into operation.²

Many of those who kicked at any measure of control of their own activities, however, were ready to take a fair-minded view of regulations directed at somebody else, and were even prepared to suggest how such regulations could be profitably extended. Viscount Duncan wanted to know why Morpeth had avoided the window-tax; Horsman wondered what "mysterious difficulties" prevented the Government from tackling the interments question; Reynolds regretted the exclusion of Scotland and Ireland.³ These fractions of support added up to a quite considerable total, and in reply to the clamour of energetic interests there went up a counter cry of satisfaction that the Bill did so much and regret that it did not do considerably more.

Outside the House public attention was distracted by the exciting Continental news, by the spectacle of thrones toppling and Metternich packing his bags for London. As in 1847 and earlier years it was a vociferous minority on either side which fought over the principles of sanitary government. The doctors and clergymen of the Health of Towns Association conducted a vigorous campaign of lecturing, letter-writing, and lobbying, and drafted petitions for signature by the working classes; and Chadwick found time to supply ammunition to local leaders in strategic points. From the strongholds of local self-government, the City and the metropolitan parishes, rose an angry hum of disapproval.

¹ *Hansard*, vol. xcvi, p. 1022, 21 February 1848 (Urquhart).

² *Ibid.*, vol. xcvi, p. 711, 5 May 1848, and p. 1175, 18 May 1848.

³ *Ibid.*, vol. xcvi, pp. 404, 406, 420, 10 February 1848.

The Common Council resolved unanimously to condemn the Bill.¹ No place in the world had so complete a system of drainage as London, said the City Remembrancer.² "It would turn out to be nothing but mere humbug," a Builder Commissioner forecast of the sanitary movement.³ "Read 'Morpeth' as 'Metternich,'" cried one Tower Hamlets ratepayer.⁴ The *Morning Chronicle* was the chief vehicle for these protests; and the most active pen in the service of local self-government was that of Toulmin Smith, whose writings gave to the opposition such shape and philosophy as it possessed. A legal antiquary of a deeply encrusted Toryism, he saw in the Public Health Act one further episode in that Whig plot by which the Anglo-Saxon institutions of the kingdom were gradually being replaced by the government of Whig Commissioners, and the ancient Common Law defences of person and property were being overthrown by "ink and paper law-making." "If this act, or anything like it, passes into a law, it will have to be recorded in history that the Court of Star Chamber was abolished in 17 Car. I, A.D. 1641, but was re-established, with greatly increased powers, in 11 Victoria, A.D. 1848."⁵ His solution to the sanitary problem was admirably simple—a closed cesspool should be provided for every house and the Highway Surveyors stirred to activity in laying down new road drains;⁶ and to enforce public health regulations the courts lect, vestry, hundred, and county courts should be restored to their original dignity.⁷ Where was the need for a central department "to tell the People of England, from a closet at Whitehall, how each man is to make his drains and water-closets, to build his ash-pit"?⁸

From Leeds, Manchester, Bradford, Birmingham, delegates from the town councils were sent to London to protest against the Bill; but in every place where such opposition manifested itself Chadwick could count upon the support of an influential section of the inhabitants. The Health of Towns Association circulated a

¹ *Times*, 22 May 1848.

² *Sanitary Condition of the City of London: letter to Lord Ashley from the City Remembrancer* (pamphlet), 1848, p. 4.

³ *Ibid.*, p. 12.

⁴ *Morning Chronicle*, 29 March 1848.

⁵ Letter to the *Jurist*, 26 February 1848.

⁶ *The Parish. Its obligations and powers: its officers and their duties*, 1854, p. 302.

⁷ Letter to the *Daily News*, 30 March 1848.

⁸ *Centralisation or Representation?*, 1848, p. ix.

questionnaire to sixty-nine of the principal towns of England and Wales, and summarised the returns in a pamphlet which breathed local suspicion of the existing authorities, and scorn for the idea that, unaided and uncontrolled, they could lift themselves out of their present squalor.¹ It was not true, Chadwick maintained, that the town councils would offer the universal resistance to a central department that was prophesied by Divett and other disciples of Toulmin Smith. The people of Divett's own town, Exeter, had invited Chadwick and Southwood Smith to attend a public meeting. "We found our names placarded as intending to address them. The mayor gave us a dinner. I found it extremely difficult to get away and avoid the applications to see places, and I have since been in correspondence with parties in the town who are anxious that steps should be taken." The evidence—the appeals which reached Chadwick from Liverpool, Lancaster, Warrington, Rugby, Edinburgh, St. Andrews, Belfast, Dublin, and elsewhere; the applications addressed to the Metropolitan Sanitary Commission in the mistaken belief that they possessed executive powers—proved that in many places there existed an anxious desire to benefit from the advice and assistance of well-informed authority. Surely such places should be allowed to exercise the right of self-government, and choose for themselves whether or not to adopt the Public Health Act!²

There were, as *The Times* wisely remarked, just and prudent limits in the capacity of a Bill as there were in the tonnage of an East Indiaman.³ The loss of some of the subjects which were omitted from the original draft, or were later jettisoned in Committee, was not regretted by Chadwick. The exemption of London, he considered, would not be serious if the General Board were given full powers of inquiry in preparation for a separate measure.⁴ Coke and iron manufacturers had risen in protest against the smoke clause, and its excision was judicious.⁵ The limit on the duration of the Poor Law Commission had not

¹ *Report of the Sub-Committee on the answers returned to Questions addressed to the Principal Towns of England and Wales, and on the objections from corporate bodies to the Public Health Bill, 1848.*

² E. C. to Morpeth, n.d., c. 10 May 1848.

³ *Times*, 11 February 1848.

⁵ E. C. to Morpeth, 8 August 1848.

⁴ E. C. to Morpeth, 30 June 1847.

worked well (it had encouraged some local authorities to go slow in the hope that in five years' time the Act would be repealed and the Commissioners hanged), but Chadwick was willing to accept a term of five years to the Board's life as one of the least injurious concessions.¹ But, looking over the Bill as it emerged from the Commons at the end of June, he sighed that it was a mere wreck of what had been intended.² "As it stands it will only enable the commencement of legislation to be made," he told his friends. "Great administrative wisdom and experience in the General Board and Inspectors might still extract some good from its practical operation; but that if it be put into other than the most competent hands, more evil than good may arise from it. I never could have thought that any Government would have conceded so extensively the power and authority of a central controlling Board either to pitiless self-interest or senseless clamour."³ If the General Board were to exercise any real powers of initiation and supervision in the localities, those powers must now be inserted in the Lords. Here, fortunately, the friends of Chadwick mustered strongly, and he wrote at once to brief the Bishop of London, Lord Ellenborough, Lord Campbell, Lord Lansdowne, and the Duke of Buccleuch.

How was the machinery of public health administration to be introduced into the localities? This was the provision which would determine the leverage the General Board could exert against recalcitrant districts, and much of Chadwick's dissatisfaction arose from the inadequacy of the clause to which the Commons had assented. The Commons had rejected on sight the original optimistic suggestion that one householder in fifty, whether he was a ratepayer or not—he "might really be of the working classes," Chadwick told Lord Lansdowne⁴—should have the power to bring all the apparatus of sanitary inquisition to bear upon the obdurate forty-nine. It was now provided that if one-tenth of the inhabitant householders rated to the relief of the poor signed a petition, the General Board could set to work. "It is well to get the smallest wedge," declared Chadwick, his metaphors getting hopelessly mixed in his annoyance, "but we should

¹ E. C. to Morpeth, n.d. ² E. C. to Sir George Larpent, 20 June 1848.

³ E. C. to William Lee, 10 July 1848.

⁴ E. C. to Lord Lansdowne, 13 July 1848.

be sure that it is really a wedge, and not a rotten staff. For opening the worst-conditioned districts the provision as it now stands will I fear be a mere rush."¹ At Manchester and Liverpool, for example, the signatures of three or four thousand ratepayers would be required to the petition. The trade unions and Chartists, who had begun to notice this "poor man's measure," would not overlook the fact that its initiation depended upon the goodwill of another class, the ratepayers, who were biased against it by the dread of increased rates. "I do not see how any one could get up in the Commons and contend that where there was a heavy infantile slaughter, or where the labouring classes are grievously ravaged by epidemics, there shall be no intervention except on the initiation of the middle classes."²

There must then be some formula for intervention, which, once recited, would bring the Board's Inspector posting down from London, whether the local tradesmen were ready to give him a welcome or not. The possible formulæ were canvassed in turn by Chadwick and the Bishop of London, who had expressed his willingness to introduce the "Poor Man's Clause" in the Lords. The excess of deaths from zymotic diseases above the general average for the towns of the whole kingdom might be taken as the test, suggested Chadwick. In 1841 the deaths from epidemic diseases formed 21 per cent of the total; he would propose intervention in any place where the proportion rose above 20 per cent. But in the past the registration of the causes of death had frequently been tampered with; to check any such ratepayers' trickery, they should have at least one further test. Farr advised that it would be best to take the deaths of children under five, which in 1841 averaged 38 per cent of the whole. "Surely," cried Chadwick, "38 per cent of infantile deaths and 20 per cent of deaths from epidemics to be protected against authoritative intervention ought if not the Commons to satisfy Moloch himself! What a piece of evidence of our barbarism must not this hereafter appear to be." He would like also to have "some direct reference to the poor man as a class," on the basis of the expectation of life given in the Northampton table.³

When the question came to be discussed in the Lords, however,

¹ E. C. to Lord Lansdowne, 13 July, 1848.

³ E. C. to the Bishop of London, 12 July 1848.

² Ibid.

the Bishop was not present, and—with the best will in the world, as his friends assured Chadwick—they struck out the "Poor Man's Clause," to which they thought the Commons might object, and inserted a smoke abatement clause, to which the Commons certainly would not consent. Thus, the unsatisfactory method of initiation devised by the Commons remained unaltered, at the same time as the obstacles to its working were increased. The Lords had made bad worse. The smoke clause, Chadwick told Morpeth with justifiable exasperation, would bring all the manufacturers into the field against sanitary measures—and there were places in the north where two or three manufacturers exerted such influence over the ratepayers that they could put a stop to any application whatsoever. Then all the butchers, fishmongers, and poulterers, who were threatened with inspection, all the lodging-house keepers and owners of cellar tenements, all persons carrying on noxious trades—all these were ratepayers; and they would find other allies in the middle classes, frightened by stories of heavier rates. Yet, as the provision for initiation now stood, "unheard of combinations" must be looked for amongst these very ratepayers to secure the introduction of measures which would benefit chiefly the working classes!¹ Fortunately the set-back was only temporary. Despite Chadwick's protests the Lords insisted on retaining their smoke prevention clause; but in other respects the Bill was much improved before it returned to the Commons. The Bishop of London appeared in the House to press the importance of his "Poor Man's Clause," and it was re-inserted without opposition. The hands of the General Board were strengthened by providing that the local authority must seek their sanction before mortgaging the rates, and that the local surveyor should be irremovable except with their consent. As a further precaution against jobbery, an individual ratepayer was given the right to appeal to the General Board against any exceptionable expenditure by the Local Board. Altogether, as Chadwick told Joseph Hume, "the Health of Towns Bill as amended by the Lords is to some extent a working measure."² But would the Commons accept such large alterations in the original Bill? "I understand from the Speaker,"

¹ E. C. to Morpeth, 21 July 1848.

² E. C. to Joseph Hume, 5 August 1848.

Morpeth informed Chadwick, "that the entire interference with the Bill is, rigidly considered, so irregular that a general condonation must cover all."¹

Chadwick's fears in this instance proved groundless, however. John Bright rose immediately to attack the smoke clause, and, as Chadwick expected and hoped, it was dropped without further discussion.² There was an anxious moment when Morpeth deleted the Bishop's version of the "Poor Man's Clause," but he replaced it at once with a clause suggested by the Registrar General, empowering the General Board to apply the Act to any place where the deaths from any cause exceeded 23 per thousand on the average of the previous seven years. It was not so good a test as the infantile mortality, Chadwick told him; but, he added with satisfaction, "I have had it tried over, and I believe it will give more places."³ The sanction of the General Board to the mortgaging of local rates was preserved "as by fire," and also the appeal from aggrieved owners or occupiers.⁴ "In other respects, it was lamed; it was very badly supported; many friends were absent, and parties directly interested against the Bill mustered strongly."⁵

The Public Health Act of 1848 (11 & 12 Vict. c. 63) established a Central Commission, terminable in five years, and consisting of three members, with the First Commissioner of Woods and Forests as president (s. 5). Their powers of initiating sanitary measures were strictly defined: their aid must be invoked by a petition signed by one-tenth of the ratepayers; failing a petition, they could take action only where the death rate from all causes had reached the figure of 23 per thousand (s. 8). In either case, a preliminary inquiry would be conducted by a Superintending Inspector, who would submit a report to the General Board (s. 9). The Act would then be applied by Order in Council; or, in districts where a Local Act was already in force or where the boundaries were to be altered, by a Provisional Order, which would not become effective until approved by Parliament (s. 10).

In districts possessing municipal institutions, the Town Council

¹ Morpeth to E. C., 26 July 1848.

² *Hansard*, vol c, p. 1178, 7 August 1848.

³ E. C. to Morpeth, 8 August 1848. ⁴ Morpeth to E. C., 8 August 1848.

⁵ E. C. to the Bishop of London, 8 August 1848.

was to be the public health authority (s. 12). Non-corporate districts were to be given an entirely new authority, a Local Board of Health, the size of which would be specified in the constituent Order (s. 14). Middle-class influence in these Boards was jealously guarded, members being elected by plural voting, ranging from one vote for persons with property to the annual value of £50, and rising by one vote for every additional £50, to a limit of six votes for those possessing over £250 (s. 20). As officers the Local Board were to appoint a clerk, a treasurer, an inspector of nuisances, and a surveyor; for the dismissal of the last of these the approval of the General Board was necessary (s. 37). If they thought fit, they might also appoint a Medical Officer of Health; the appointment and dismissal of such an officer were subject to the approval of the General Board, but his remuneration was to be determined by the local authority (s. 40). Chadwick had thus failed to make obligatory the appointment of the most valuable of the local officials; and though both surveyor and officer of health were secured from summary dismissal, their independence of view was threatened by the fact that their salaries were fixed by the Local Board.

Over forty clauses (ss. 41-85) dealt with the powers to be exercised by the new local authorities, the effect being, as Chadwick pointed out, that for the reasonable expenses of an inspector's survey, a district would be invested with all the advantages of a costly Local Act. Far from restricting the functions of local authorities, Morpeth had explained in reply to the anti-centralisation party, the measure would in many cases greatly widen them. Of the English municipal corporations only twenty-nine possessed Local Acts which conferred powers of drainage, cleansing and paving on the Mayor and Corporation. In sixty-six corporate towns such powers were exercised jointly with a body of *ad hoc* Commissioners; in thirty by Commissioners independently of the Corporation. Sixty-two corporate towns possessed no Local Act whatsoever, to enable either Corporation or Commissioners to perform these essential services within their boundaries. Of the non-corporate towns in England, with more than 5,000 inhabitants, 175 had Local Acts, but 296 were without. "It was upon these 296 towns which had no Local Acts, and upon the 158 corporate towns which had at present either no powers at all, or

divided powers, that his Bill would, for the first time, confer the exclusive power within their boundaries of cleansing, sewerage, paving, and providing a supply of water."¹ In their details the provisions showed that six years' campaigning by Chadwick and the Health of Towns Association had left its mark. Thus, it was provided that no new house might be built without drains of the size, materials, level, and fall prescribed by the local surveyor, nor without a sufficient water-closet or privy or ash-pit; a house within a hundred feet of a sewer might be required to communicate with it, and in the default of the owner the Local Board were empowered to construct such communicating drains, and recover the cost so incurred (ss. 49, 50). The Local Board—to take a further example—were given powers to provide a water supply, either under public management or on contract with a private company; the supply to be pure and wholesome, and at high pressure. But it was not lawful for the Local Board to supply water if there were a water company already in the district able and willing to do it adequately, on terms fixed by an inspector or an arbitrator. A householder might be required to obtain a water supply, if it could be furnished for a sum not exceeding 2d. a week (ss. 75, 76).

A General District Rate for the purposes of the Act was to be levied on the occupiers of property rated to the relief of the poor, and Private Improvement Rates imposed for works benefiting individual occupiers (ss. 87, 88, 90). To raise money for works of a permanent nature, the rates might be mortgaged by the Local Board. Such mortgage could be made only with the consent of the General Board (ss. 107, 119).

Tenuous as was the element of "centralisation" in the Act, the Lords, responding to Chadwick's concealed guidance, had left the General Board with more aggressive functions than the Commons had been prepared to grant. That is the answer to those later critics who have dismissed the Act scornfully as a "small scheme."² Small as it was, it was as much as the Commons could swallow; and very much bigger, in fact, than the sadly botched measure which had been passed from the lower House to the Lords, where Chadwick's friends managed to repair some

¹ *Hansard*, vol. xcvi, p. 736, 5 May 1848.

² J. L. and B. Hammond, *Lord Shaftesbury*, pp. 159-60.

of the damage done by the opposition in the Commons. The original Bill was not shaped to Chadwick's liking, as he pointed out to those who saddled its imperfections upon him; and the Act which eventually emerged represented no more than what his adroitness and tenacity had succeeded in preserving after Morpeth's draft had been shot to pieces in the lower House. It was a continual lament of Chadwick's that the schemes of his conception had to be put into the clumsy hands of politicians, and that, after a Parliamentary mauling, the resultant patchwork of compromise and amendment was passed back to him to make into a practical working measure. He might then with good reason deny the paternity of this mongrel measure; but sufficient remained of a recognisable structure for it to be acknowledged as at any rate a family connection of the Poor Law Act of 1834. Such strength and purpose as the Act exhibited, it owed chiefly to Chadwick. This is evident in the ground plan it lays down for the relationship between the local authorities and the central Government. In the attitude adopted towards this fundamental problem by the Poor Law Act of 1834 and the Municipal Corporations Act of 1835 there was a sharp antithesis, the resolution of which supplies the key to half a century of administrative history. Apart from requiring Treasury sanction for the raising of loans by a Corporation and for the alienation of its property, the Municipal Corporations Act did little to restrict the traditional autonomy of the local authorities. On the other hand, apart from the control of police, it gave them no new powers. It left them, diverse in their customs and powers, unequal in their areas and reserves of skill, to meet the problems of the industrial age as best they could, with no Minister or State department charged to guide and teach, and if necessary to admonish and correct them. Against this conception, Chadwick had opposed the principles of the Poor Law Act, those administrative ideas which in the jargon of the time were known as "centralisation"—the tutelage of a specialised central department, exercised through the media of the departmental circular and an expert inspectorate; areas cut to a pattern drawn by the technical demands of administration; a uniform system of *ad hoc* bodies in the localities to serve as the instrument of central policy, entrusted with a minimum scope of function and expected to attain a mini-

imum standard of performance. Nothing so clear-cut as this can be seen, of course, in the Act of 1848. But it was a great step forward that a central Board should have been established, an embryo Ministry of Health, with aggressive powers, however slight at first, to make head against sanitary evils; and that a beginning should have been made towards imposing a code of public health on the country, defining legal minimum standards for drainage and water supply. It was a great point gained that under the Act considerable powers for the defence of the public health and the construction of public works could be readily and cheaply conferred on authorities which had formerly lacked them. By stretching to the utmost the powers with which Parliament had endowed the central Board, by extending the imponderable authority which superior information and capable officers lent to a Government department, by attempting to persuade where to command was out of the question, Chadwick hoped even yet that the new Board would not fail in its appointed task.

One day in May 1848, in the middle of the struggle for the Public Health Bill, a clerk waited on Chadwick at Gwydyr House with an unexpected request—for information how his name should be entered for the Companionship of the Bath.

"All things and Lord John's previous displeasure considered, I was not a little surprised at the honour . . ." he confided to a friend.

"The Prince had made the recommendation as an observer. He had, I found, taken an interest in Sanitary questions and had read the reports.

"I have had one interview with him on the subject of the improvement of labourers' dwellings. I do not remember that I was ever better questioned. I must be strongly biased towards him, but from all I hear of him he appears to be a person who divested of his rank must take a very high position."¹

The C.B., of which this was one of the first awards for civil services, was the only official recognition that Chadwick's labours were

¹ E. C. to W. D. Christie, 29 May 1848. He told W. E. Hickson (9 May 1848): "It was an unexpected and to me a strange affair not initiated by the Government."

to get until the last few months of his long life. It was well timed. At the end of the 1848 session Chadwick could look back on a decade of continuous agitation and inquiry in the cause of public health. At last, crowning the ten years of drudgery, a Public Health Act was on the Statute Book. The machinery for its execution at the centre and in the localities was in process of construction. In London a single authority was at work under his guidance, planning the drainage and water supply of the whole capital. Slowly, but with gathering momentum, the new values which the "Sanitary Idea" set before society were permeating the minds of law-makers and administrators.