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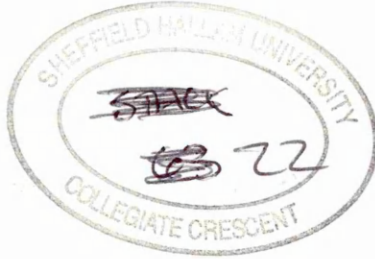
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CHOLERA IN THE LARGE TOWNS
OF THE WEST AND EAST RIDINGS, 1848-1893

by

Michael Sigsworth

A thesis submitted to the Council for
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ABSTRACT

CHOLERA IN THE LARGE TOWNS OF THE WEST AND EAST RIDINGS OF YORKSHIRE, 1848-1893

This study discusses the three cholera epidemics in 1848-49, 1853-54 and 1865-66, focussing on how the disease was experienced and acted upon, as well as its impact in the four large towns of the West and East Riding of Yorkshire (Bradford, Hull, Leeds and Sheffield). It does this comparatively and sets cholera outbreaks in the context of local social, administrative and geographical factors. The main thesis is that historians should not talk about the national experience of cholera for the period 1848-66, rather they should recognise different experiences and impacts between towns, through time and at different levels of society. A subsidiary argument, however, is that the scares which occurred in the 1870s, 1880s and 1890s can be considered at the national, even international level.

In 1848-49 there were major differences in mortality between the four towns, with Hull and Sheffield at two ends of the spectrum nationally and regionally. In 1853-54 and 1865-66 none of the four towns experienced a major epidemic, though they did experience exceptional levels of public health activity, such that an 'epidemic consciousness' can be identified. While nationally there was an incremental fall in cholera mortality over the three later epidemics, in the four towns there was a single fall after 1849. As each threat passed there was growing confidence that cholera was controllable, though it never lost its power to 'shock'.

In 1848-49 there were major differences between the towns in levels and forms of activity both to the approach and the containment of the epidemic. This was due to a number of variables: social relations and class attitudes, the role of the medical profession, theories of cholera's etiology (including the gradual adoption and adaptation of Snow's ideas), local reactions to relations with central government, the intensity of the mortality crisis and past experiences of epidemic diseases. The most striking feature in 1853-54 was the lack of variation in official actions across the towns. During and after the 1866 epidemic a two-tier approach was adopted, with cholera increasingly seen as a port disease. Was cholera the local sanitary reformers' best friend? The answer given is no, but this is qualified in several ways.

The commonest middle class view of the later epidemics was that those who suffered were culpable, due to their ignorance and fecklessness. In other words, the problem was not so much the disease as the people. Working class reactions to sanitary reform were not characterised, as is often said, by ignorance or hostility, rather they were varied and patterned. Actions were guided by a specific, usually local, understanding of urban disease ecology and of the wider determinants of health and disease. This knowledge of the local physical environment was linked to views on rights and responsibilities. The working class did not share the one dimensional environmentalism of the sanitarians; instead they contended that many other factors were determinants of health, not least wages and hours of work.

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Michael Sigsworth
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1.1. CHOLERA AND ITS HISTORY.

1.1.1 MAIN THEMES OF THESIS

Cholera and its impact are amongst the most well known and most widely discussed topics in nineteenth century medical and social history. Is there then, anything new to say on the topic? This thesis will argue that there is, by exploring new empirical and methodological terrain. For Britain at least, the detailed studies of cholera focus almost exclusively on the first epidemic in 1831-32, and consider the disease primarily at the national level. In this study the focus is on the three later epidemics - 1848-49, 1853-54 and 1865-66 and on how the disease was experienced and acted upon at the local level.

Methodologically, this study will analyse, compare and explain the experience of the disease in the four large towns of the East and West Ridings of Yorkshire - Hull, Bradford, Leeds and Sheffield - and will set cholera outbreaks in the context of local sanitary reform. The main thesis is that historians should not talk about the national experience of cholera for the period 1848-66, but must recognise that there were very different experiences and impacts between towns, through time and at different levels of society. A subsidiary argument is that after 1866, while there were no further cholera epidemics, the scares which occurred in the 1870s, 1880s and 1890s can be considered at the national, even international level.

Until the 1960s there were two quite distinct histories of cholera in nineteenth century Britain. One was written by medical historians and was concerned largely with medical science, especially the evolution of knowledge of the disease, and how this led to the control of the disease.¹ The second was produced by social historians, for whom cholera epidemics were shock events which both highlighted the consequences of rapid industrialisation and urbanisation and, in turn, stimulated public health reforms.² These two discourses tended to be quite separate, with different approaches and interests. In recent decades there has been a growing dissatisfaction with the assumptions of both approaches, especially the separation of the medical from the social and vice versa. This has given impetus to the emergence of a new area of scholarly work, the social history of medicine. Social historians of medicine have rejected traditional assumptions by considering medicine as itself a social activity, linked at all levels and in various ways to the wider society.³ In short, the social history of medicine recognises that there was more to medicine than its developing scientificity. Also, social historians have used beliefs about health and disease to illuminate social structures, social relations and ideologies. Predictably, the development of a social history of medicine has been accompanied by major revisions of medical and social history with, unsurprisingly, a large new literature on cholera.

1.1.2 CHOLERA AS A TOOL FOR HISTORICAL ANALYSIS.

Asa Briggs was the first British scholar to discuss cholera's potential as a tool for historical analysis, an issue he raised in a response to a collection of essays on cholera in Europe edited by Louis Chevalier.⁴ Whilst Briggs pointed to what he thought were a number of deficiencies in Chevalier's work, he was in full agreement with the general approach which stressed the social significance of cholera epidemics. For Briggs, cholera's importance to the historian arose out of its profound social and political impact. Cholera's approach invariably heightened existing social tensions, but its main effects were felt when it arrived in a country or community. Under these circumstances, Briggs argued, the disease tested local administrative structures, exposed social and political relations, and provoked serious social conflicts. For these reasons he believed the study of cholera promised to be much 'more than an exercise in medical epidemiology.'⁵

Essentially, Briggs' article was programmatic, its main intention being to demonstrate the scope for further research into what he considered to be an important though neglected chapter in social history. His main reservations about the Chevalier essays were that although they discussed cholera epidemics in different towns and countries, the opportunity for comparison between the experience of cholera in different localities had not been fully exploited. Similarly, Briggs argued that the essays had been conducted within too narrow a

range of reference, concentrating almost exclusively on the first epidemic, such that comparisons with the later epidemics were precluded. Lastly, Briggs was also critical of the way in which no attention was paid to the way in which later developments in medical science threw light on the events of 1831-32.

Briggs was not alone in recognising the potential of more detailed research into cholera. The following year, the American historian Charles Rosenberg published The Cholera Years, which was the first comprehensive monograph on the social history of cholera.⁶ Rosenberg focussed on successive American cholera epidemics and used cholera as a vehicle to examine a number of social, economic, political, cultural and medical themes, and the complex interrelationships between them. Particular emphasis was placed on using cholera epidemics to reveal and analyse important aspects of social change. Rosenberg also developed a form of comparative analysis, both temporally and geographically, whereby the different experiences of the three epidemics across North America were considered. In a subsequent article, Rosenberg reiterated his belief that epidemics were an important tool for social and economic analysis.⁷ Successive cholera epidemics, he argued, provided convenient points of entry into nineteenth century society and were effective devices for sampling changing social and economic relationships.

Between them, Briggs and Rosenberg paved the way for further research and particularly for developing comparative

studies. Paradoxically, those historians who have since contributed to the social history of cholera in England have mostly confined their efforts to the rigorous investigation of the first epidemic. Moreover, the potential of comparative studies, identified by Briggs and developed by Rosenberg, has also been neglected.

1.1.3 'THE RETURN OF THE PLAGUE' - CHOLERA, 1831-32

There are two important monographs, by Morris and Durey, which have examined the 1831-32 epidemic in a national context and several articles which focus on local experiences.⁸ To varying degrees these works adopted similar approaches to those suggested by Briggs and Rosenberg, in that, as well as providing a narrative of the epidemics, they used cholera to examine a range of themes. Moreover, they leave the reader in no doubt as to why, in a century when severe epidemics of one disease or another were rarely absent, cholera, which was a rare visitor to Europe and whose demographic impact was relatively minor, was regarded as 'the classic disease of the age'.⁹ The title of Durey's book, The Return of the Plague, provides a clear indication of how contemporaries perceived and reacted to the arrival of cholera.¹⁰ It was clear from the social upheavals seen in European towns affected by cholera, that it could generate a crisis of considerable magnitude, comparable to the plague experiences of the fifteenth and seventeenth centuries.

Cholera's social and political impact was such that a number of historians have used cholera epidemics as a 'test' for the stability of a particular society. With regard to the first British epidemic, Durey argued that the disease 'unsettled the normal functioning of society and brought to the surface latent class antagonisms'.¹¹ Morris took a similar stance, contending that the epidemic strained society to the utmost and was a 'test of social cohesion'.¹² Both agree that British society withstood the strain.

Although the first cholera epidemic undoubtedly led to pronounced social dislocation, there are several problems with Morris and Durey's methodology. The argument that the epidemic of 1831-32 represented an exceptional or isolated crisis which disrupted the normal functioning of society can be challenged. Whilst the epidemic was the first serious public health crisis of the century and, in this respect, was an exceptional event, there is little evidence to show that the socio-political developments which accompanied it were unusual. Most historians agree that the 1830s and, indeed, the entire period 1800-1850 was riddled with crises of one sort or another, some of which have been interpreted as examples of overt political or class conflict which posed a far more serious threat to social stability than the cholera disturbances of 1831-32. When this is taken into account, heightened class tensions, far from being abnormal, were in fact a recurrent phenomenon. Moreover, there are additional dangers in singling out a particular year or crisis and examining it in isolation. For example, both Morris and Durey

argued that the popular disturbances triggered by cholera were usually local responses precipitated by deep rooted working class anxieties about body-snatching, dissection and the disruption of customs by preventive actions. As such they were judged to have been limited reactions to specific grievances directed against medical men or other 'officials' rather than examples or expressions of overt class conflict. This type of analysis applied to, for example, the Captain Swing riots or the disturbances which accompanied the introduction of the New Poor Law, might also conclude that they too were limited local reactions to very specific grievances. Most social historians, however, see a pattern of class struggle.¹³

As Richard Evans has pointed out in a recent article, both Morris and Durey took the expectation of cholera leading to serious social upheaval and possibly revolution as a starting point for their analyses.¹⁴ Therefore, their conclusion - that the cholera related events of 1831-32 demonstrated the inherent stability and durability of British society - was foreordained by the assumption that only revolution would have demonstrated the opposite. Evans' analysis of the relationship between successive cholera epidemics and political turmoil in Europe led him to argue that, in view of the relatively small number of lives claimed by the disease, 'it is perhaps expecting too much of an epidemic disease like cholera if one expects it to lead directly to revolution'.¹⁵

One of the most striking features of the various studies on the first British cholera epidemic is that, in keeping with and contributing to the traditions of the social history of medicine, a phenomenon previously thought of as 'medical' is now discussed as part of, rather than separate from, the wider social, cultural and political context. In one way or another, the fact that cholera impinged upon all facets of life and was a matter of concern to all members of society meant that it attracted comment from individuals and institutions across the entire community. The use of various sources, including newspapers representing all forms and shades of opinion, medical journals and records, sanitary surveys, business records, diaries, parliamentary papers and reports, and local government records, has enabled historians to piece together a comprehensive description and mount a rigorous analysis of all facets of the first epidemic. These have been used to illuminate and evaluate contemporary power structures, class values, attitudes and relationships as well as medical theory and practice, sanitary conditions and public health arrangements, the influence of religion and its relationship with science. The sheer number of publications on the epidemic of 1831-32 and their diversity lends support to Rosenberg's claim that cholera is a valuable tool for social and economic analysis.¹⁶ Similarly, the variety of ways in which cholera has been used by historians and the number of insights it has provided, stand as testimony to the development of the social history of medicine as an area of scholarly endeavour.

A major limitation of the historiography of the British cholera epidemics is that few historians have examined the later epidemics. Those that have written on them, have done so incidentally whilst highlighting developments in public health or, more rarely, medical science. Exceptions to this trend are Kearns, who examined the spatial incidence of the later epidemics and argued that in 1853-54 and 1866 cholera was predominantly a disease of the major seaports and Luckin who has considered the London epidemic of 1866.¹⁷

Although a thorough study of the later epidemics in Britain has not yet been produced, one British historian has recently published a book which does look at successive epidemics but in Germany. In Death in Hamburg, Richard Evans provides a detailed narrative of the city's cholera experiences through the nineteenth century, culminating in the great epidemic of 1892.¹⁸ Evans explores the epidemic from a number of angles, examining its social geography, the reactions and behaviour of different social and political groupings, and the response of the medical profession. He concludes by assessing the longer term impact of the epidemic on matters like sanitary reform, and Hamburg's social and political structures. By asking why the epidemic of 1892 was so severe, he sets himself the task of providing a detailed analysis of the city's social and political history throughout the period 1830-1890 and developing these issues into a case study of the urban environment and its relationship with disease and mortality.

Given the high regard with which the studies of Rosenberg and more recently that of Evans are held, it is surprising that the later British epidemics have not been studied by historians to any great extent, especially as mortality levels in 1848-49 were nearly double those of the first epidemic.

TABLE 1.1

DEATHS FROM CHOLERA IN ENGLAND DURING THE MAIN EPIDEMIC YEARS
IN THE NINETEENTH CENTURY,

Year	1831-2	1848-9	1853-4	1865-6
Deaths (Wohl)	32,000	62,000	20,000	14,000
Deaths (Reg-Gen)	32,000	55,181	24,516	15,668

(from A.S. Wohl, Endangered Lives: Public Health in Victorian Britain, 1983, p. 118 and Annual Reports of the General-Registry Office, 1848-1867) There are many different figures cited, but what is important here is the relative number of deaths in the various epidemics.)

A number of reasons can be suggested as to why the later epidemics have not been thoroughly investigated. There is certainly a feeling that the first epidemic made the greatest overall impact on British society and that during the later cholera years the disease failed to provoke responses similar to those seen in 1831-32.¹⁹ There is also a view that many important aspects of the later epidemics have been covered in narrower studies on disease etiology and public health.

Nevertheless, these viewpoints raise as many questions as they answer. For example, one might ask in what ways did the social response to the later epidemics differ and why was this so? Given that the social history of medicine aims to study medicine in context, it is a major failing that cholera has not been more thoroughly investigated in the different and changing contexts of 1848-49, 1853-54 and 1865-66. This thesis also looks at the cholera scares in 1871-72, 1883-84 and 1892-93. Indeed, cholera was never absent from Britain between 1847 and 1895 and deaths never fell below 200 per annum, although the major epidemic years do stand out. (FIGURE 1.1)

1.1.4 CHOLERA AND PUBLIC HEALTH REFORM

Since the publication of Creighton's A History of Epidemics in Great Britain, historians have explored the links between epidemics and public health reform. This has led to the familiar claim that cholera was the sanitary reformers' best friend.²⁰ Cholera, more than any other disease, is said to have 'shattered complacency and opened the public mind to the idea of sanitary reform'.²¹ Predictably, a strong argument has been built around the view that the first cholera epidemic provided much of the impetus behind public health agitation in the 1830s and 1840s. Proponents of this view support their claim by pointing to the ways in which the first epidemic revived the rare precedent of state intervention in the field of public health and, in the long term, awakened a 'sanitary consciousness' amongst a small number of people who

eventually formed the nucleus of the so called 'sanitary movement'. That the renewed threat of cholera in the late 1840s coincided with major public health legislation has been interpreted as further evidence of a causal connection between cholera and reform.²² Indeed, it is suggested that whilst the threat of cholera was instrumental in the creation of a General Board of Health (G.B.H.) headed by Edwin Chadwick, the Board's failure to arrest the epidemic of 1853-54 contributed to both Chadwick's dismissal and the Board's eventual demise.²³ The fear aroused by cholera did not diminish in the 1850s and 1860s. Historians have pointed out that the Sanitary Act of 1866, which is now acknowledged as a major landmark in the history of nineteenth century public health reform, again coincided with a fresh epidemic.²⁴ Similarly, both the 1872 and 1875 Public Health Acts were passed as cholera once again threatened Britain. Given these conjunctures, it is easy to see how cholera has long been regarded as the sanitary reformers' best friend.²⁵ This study seeks to answer a different question, namely, was there a close causal connection between cholera epidemics and sanitary reform at the local level.

Until recently, much of the literature on public health has tended to focus either on the leading lights of the sanitary movement or on seeking to identify a pattern of reform. Edwin Chadwick's role as a propagandist and instigator of reform has been well documented, as have the lives of other eminent reformers such as Sir John Simon and William Farr.²⁶ Although there have been several articles and

minor publications on the activities of reformers at the local level, the history of public health has been dominated by studies of national figures and what are deemed to have been the major pieces of national legislation.²⁷

One of the first historians to contend that there was a clear historical pattern to social reform in the nineteenth century was Oliver MacDonagh, who produced what he termed 'a five stage model of administrative growth'.²⁸ When discussing the model's application to public health reform it is convenient to treat it as a two stage process, the first part characterised by the recognition of 'social evils' and the formulation of legislative remedies, and the second by the administrative actions of state departments and their personnel. When applied to the history of public health reform the model does initially seem attractive. Indeed, a good case could be made for cholera playing a significant part in the identification of 'social evils' and providing at least some of the stimulus for early attempts at amelioration. The appointment of Chadwick as head of the G.B.H., or Simon as head of the Medical Department of the Privy Council, might well be interpreted as the beginning of the second stage of MacDonagh's process. A number of historians have argued against this model and have suggested alternatives.²⁹ Others have argued that there was no discernible pattern to health reform.³⁰ Moreover, and of greater relevance to the history of public health and this thesis, MacDonagh failed to take account of the fact that many reforms were the result of local initiatives and that most legislation passed by central

government was permissive, with adoption and implementation left to local authorities. For historians like Wohl, attention to local actions is imperative because 'however much direction central government might give from above, ultimately, the health of the nation depended on sanitary measures at local level'.³¹

Much of the work on public health reform at the local level has shown that the nature and pace of improvements differed from place to place and was governed or influenced by a number of variables. The problems posed by local geography and economic structures have been suggested as important, as have class relations, attitudes to central power, the growth of civic pride and perhaps public health 'crises'.³² Whilst these factors may have varied in importance and impact from place to place, an increasing number of studies suggest that the most crucial determinants of policy and action were local social and political structures, along with technical and legal difficulties.³³

A common problem with local studies is that too often they remain just that, and while the multiplication of such studies will be valuable, it is vital that these are brought together and related to each other and to the national scene. The recent emphasis on reform at local level and more especially, evidence of different rates of progress, implies that a third chronology of public health reform based upon developments at the local level could be added to two already acknowledged by historians, namely 'the familiar story of

royal commissions and public health acts' and the second involving measurable improvements in the nation's standard of health.³⁴ However, this third chronology will not just emerge from the addition of more pieces to the mosaic, patterns and the overall picture have to be constructed from the pieces.

1.1.5 CHOLERA AND THE SOCIAL HISTORY OF MEDICINE

At the end of the last century it was Creighton who established the notion of the nineteenth century as an age of epidemics. This view has never been seriously challenged, despite the fact that the century's two major killers, diarrhoea and tuberculosis, were endemic diseases.³⁵ Historians who have concentrated upon medicine-as-science have discussed epidemic diseases in terms of how understanding of their etiology and nature grew, allowing for ever more effective prevention and control.³⁶ In this context, the fact that Britain escaped cholera when it reached Europe again in 1871-2, 1883-84 and 1892-93 is seen to be significant. However, more socially minded historians now recognize that knowledge of cholera's specificity was slow to develop and even slower to be accepted, and that the factors which led to the control and diminution of endemic and epidemic diseases were not only the result of specific actions, but also due to more general improvements in diet, environmental conditions and sanitary reform.³⁷ Thus, while Snow had suggested a water-borne route for cholera transmission as early as 1848,

the bacillus was not identified until 1883-84, and even then there remained doubters until the 1890s.³⁸

With regard to the four main cholera epidemics, the uncertainty over the nature and causes of the disease is often used to illustrate the deficiencies of early and mid-nineteenth century medical knowledge and practice. For example, it has been argued in Kuhnian terms, that in the early 1830s medical science was pre-paradigm, hence the apparent difficulties in conducting a rational debate or investigations.³⁹ The most celebrated episode in the development of the understanding of cholera has undoubtedly been the work of John Snow. From 1849 onwards, Snow 'correctly' argued that cholera was transmitted by contaminated water. What used to interest historians was why his contemporaries paid his views scant regard. Nowadays historians of medicine are more sensitive and recognise that in the 1850s there were good reasons for doubting Snow's ideas and evidence.⁴⁰ The general point is that theories of the nature and etiology of cholera should be discussed in context, not against some timeless standard of rationality or as steps towards the revelation of 'correct' understanding.

What historical debate there has been about cholera's etiology has been dominated, not by the controversies surrounding the recognition of its infective nature after 1850, but by the abandonment of contagionist views in the 1830s. Ackerknecht's claim that the change to anti-

contagionism was influenced by 'non-scientific' forces was for many years the standard account.⁴¹

The essence of Ackerknecht's argument was that in the 1830s the scientific and medical evidence on whether cholera was transmitted by contagion or through the atmosphere was equivocal. In these circumstances, he suggests that theory choice was determined by the opposition of powerful economic and political groups to quarantine and cordons, measures which were associated with contagionism. In other words, sanitary practice and its implications determined medical knowledge. Thus, the acceptance of anti-contagionism is ultimately explained by the rise of the bourgeoisie, liberalism and free trade. Pelling's work, which admittedly focuses on British rather than European medicine, has shown that there was no simple change of theory and that scientific and epidemiological debates were more complex. Significantly, she shows that contagionism and anticontagionism were not exclusive categories.⁴² Thus, it was possible to hold different views with respect to different diseases, and even the same disease in different circumstances. More importantly, she contended that by far the most common medical view was 'contingent contagionism' which held that predisposing factors, normally environmental, could facilitate contagion. More generally, Pelling attacked the notion that mid-nineteenth century medicine and epidemiology were 'unscientific' and offered a sensitive account of the to us strange brew that was sanitary science.

Recently, Roger Cooter has presented a critique of both Ackerknecht and Pelling.⁴³ Inspired by the belief that both historians offered models of separate things called 'medicine' and 'society' interacting, and that both produced histories of 'medicine as science' with society tagged on, Cooter provides a new interpretation of anti-contagionism, in which he attempts to discuss medicine and society as constitutive of each other. Following Mary Douglas's view that ideas of pollution and disruption of the natural order always express concerns about the social order, he claims that the anticontagionist's avoidance of specificity, and its stress on the atmosphere, expressed the contradictions of the new capitalist order and the bourgeoisie's desire for change.⁴⁴ Air, it is said, was what divided people, yet was common to all; what was essential to life, yet was polluted and poisoned; what was a mere part of the environment, yet was ingrained with moral qualities.

It is often argued that the implicit moralism of anticontagionism and the wider sanitarian programme disappeared with the discovery of specific etiologies for infectious diseases after 1875. Shryock said that once the cholera bacillus was identified, it 'made clear just what measures were necessary in order to protect people from further cholera invasions'.⁴⁵ This position can be challenged on two counts. Firstly, any idea or theory is open to various interpretations and how it is read is a contingent matter. Secondly, nineteenth century medical theories, as Ackerknecht showed, were always seen in terms of their practical

implications for prevention and cure. Moreover, germ theory was not discovered in isolation and then applied to practical problems, but was constituted in the context of specific and historically contingent medical and public health practices.

In their studies of the social history of cholera, both Morris and Durey use the classic 'two nations' model of social relations and social structures. This thesis uses the same model and broadly adopts the same view of class, namely that it was about interests and power. The 'two nations' were the middle class who had the means to change their own lives and the lives of others, and the working class who had few choices and felt unable to influence events. When defined in these terms class is not something which can be isolated, rather as Thompson argues, it is about historical relationships, being about developing interactions between social groupings.

Class happens when some men [and women, sic], as a result of common experiences (inherited or shared), feel and articulate the identity of their interests as between themselves, and as against other men [and women, sic] whose interests are different from (and usually opposed to) theirs.⁴⁶

Indeed, this view is more appropriate to the later epidemics than to 1832, in that by mid-century England was a more mature class society. By 1848-49 the lines were clearly drawn between two main classes; the overt struggles of the 1830s and 1840s were more muted, but class remained the main way in which events were perceived and acted upon. In the pursuit of

their interests, classes engage in what has classically been termed 'class struggle', however, at few points in time have interests been pursued unilaterally. By the late 1840s most historians agree the middle and working class had reached an accommodation, some talk of 'class collaboration' and others of 'the Age of Equipoise'.⁴⁷ This study will explore the nature and influence of class differences in perceptions and responses to cholera and public health issues.

Within the two classes there was a broad consensus of interest and identity but this did not mean there was unanimity on all matters nor that there were no differences within classes. For example, with regard to the public health measure of vaccination against smallpox, some in the working class welcomed the protection offered by state provision, while others regarded it as a coercive action and likely to damage their health. There were also differences between working class communities, as in Keighley where there was mass civil disobedience. The impact of internal stratification, say, between skilled and unskilled, and over religion, ethnicity and gender can be seen in the differential adoption of alternative medical practices such as medical botany, homeopathy and hydropathy. While it is possible to identify differences within the working class, even sub-classes, there was more that united than divided them. Namely, the common experience of powerlessness, economic insecurity and grinding poverty, and the social apartheid from those who had power and wealth.

If anything, the middle class was more divided and it has been more common for historians to talk of the middle classes than a single middle class. But the argument here is again that more united than divided them. Historically, and a point which can be often lost in theoretical hair-splitting, 'from below' they were seen as largely a single class. They were seen as those with the means to control affairs, for example, directly in the workplace or through housing, or indirectly through their control of the local economy or council. They may have bickered and been riven with differences, but they were at least in a position to bicker and to pursue their interests. In this thesis differences will be identified within the middle class itself, including differences between towns and over time. What united these divergent tendencies was a common identity of those with the means and the opportunity to control affairs, and especially to determine the destiny of communities threatened by epidemic disease. When cholera approached in 1831 the working class felt universally threatened and there was little they could do to avoid the epidemic, on the other hand all sections of the middle class had a number of options. Property owners might flee, wealthy women might organise charities, doctors might help to control and treat the disease, local political elites might debate about what to do, how to do it and how much it might cost. The point is they all had options which arose from their social and economic position, in other words, from their class position. Discussions about the nature of class have occupied social historians since the 1960s, the point nowadays, essentially following Thompson, is that abstract

discussions are futile as the essence of class was its relational character and historical specificity, hence the issue of class is pursued in the main body of the thesis.

No systematic attempt is made in this thesis to analyse the local political response in terms of party. Given the scope of the study, four towns over two decades, local political variables have been introduced only where they were overtly important. The background of party in-fighting and other factors remains to be fully explored, though it does seem this will be of more importance to the long term development of sanitary reform than to short term responses to epidemics.

1.1.6 THE STRUCTURE OF THE THESIS

This thesis will follow the lead of earlier studies by using cholera to illuminate and explore a number of themes and issues. Central to this approach is the contention that cholera was the 'shock disease' of the nineteenth century and that for contemporary society, cholera epidemics were stressful events, perceived and responded to as serious crises. Although this study will use a similar methodology and framework of analysis to those developed by Morris and Durey and examine similar themes, it differs in a number of ways. The most obvious difference is that it focuses on the three later epidemics and the subsequent cholera threats which have been entirely neglected. Thus, it involves the

application of a proven approach to a neglected area. Extending the chronological range will allow a more systematic analysis of continuity and change in the cholera experience. As noted before, to date historians have either explored the national picture or produced case-studies of local cholera outbreaks. This study is again novel in developing a comparative study of local experiences in a specific region, though it does move out from this focus to the national and ultimately international dimensions of the disease.

In the second section of this Introduction the major developments in public health policy and practice in the period 1832-1848 are discussed. Here, particular attention is paid to two related themes: the significance and impact of the first cholera epidemic and the growth and mounting influence of the sanitary movement in the 1840s. As numerous studies have shown, the latter culminated in legislative action, most notably the Public Health Act, 1848 which established the G.B.H. as the government agency, which in 1848-49, was charged with devising and co-ordinating the nation's defences against cholera. A short introduction to the economic, social and epidemiological history of each of the four towns before 1848 follows.

Part 2 The study of the 1848-49 cholera experience begins with a brief description of the epidemic's chronological, geographic and demographic features nationally and locally. The main part of this section concentrates on examining the various social and political responses to cholera at different

levels in each town. The responses of different social classes and other groupings to cholera's approach and arrival will be considered, as will those of the various and diverse local authorities. Through this, access will be gained to official and wider middle class social attitudes and values. Working class and popular responses to the epidemic are discussed from two perspectives: firstly, in terms of a reaction to sanitary propaganda and secondly, in terms of what will be argued was a distinct working class view of health and public health. Continuities and discontinuities with the epidemic of 1831-32 are also discussed. In some respects it has not always been possible to conduct as rigorous an analysis of certain factors as originally intended. Limited space, itself the result of the decision to mount detailed case-studies of each epidemic for all four towns, has meant that the impact of local political structures on responses to cholera has not been studied in depth.

Part 3 The third part of the thesis examines the 1853-54 epidemic. Like the previous section, it begins with a brief discussion of the epidemic's chronological and geographical features and its demographic impact. It will be shown that whilst cholera failed to establish itself in an epidemic form in the four towns, there were significant actions and important changes from 1849. In this context the important question of what constituted an epidemic is raised. It will be suggested that in mid-Victorian Britain epidemics are best understood as social events triggered by a natural phenomenon or a perceived threat, rather than as purely biological

events. This, it is argued, was evident not just at the official level, but across the entire social spectrum as an 'epidemic consciousness' emerged.

In 1853-54 sanitary precautions were complemented more extensively with medical measures. Indeed, once the epidemic was imminent or in progress, efforts were directed towards prophylaxis and treatment as much as sanitation. In the 1850s, organised medicine was still striving for reform and had not yet won occupational monopoly. Therefore, cholera crises provided an opportunity for practitioners of alternative medicine to advance their claims and to improve their social position. This situation allows an examination of the conflicts and rivalries within the orthodox branch of the profession, and between it and the wider medical community. This section concludes with a brief assessment of sanitary policy and practice in the period 1854-65. Again it must be stressed that because of the other tasks in hand, this has not been covered in the same depth as in epidemic years. Where this study departs from the orthodoxy is in moving away from detailed single or two town studies. If one chooses to paint on a larger canvas, then one has to use broad brush strokes.

Part 4 The study of the 1865-66 season begins by outlining the spread of the disease, and its limited mortality in the four towns. This is followed by a discussion of the debates about the etiology of cholera and how the advice of the Medical Department of the Privy Council, the new central

government agency, had changed from 1854. These followed from various developments in medical science which took place between 1854 and 1866. In this context, particular emphasis is placed on assessing the extent to which the work of men like John Snow and William Budd influenced the Privy Council and the medical profession in general. The strategies of prevention in each of the four towns is discussed and illustrates that the threat of cholera, even without a mortality crisis, was still capable of triggering an epidemic of public health activity.

Part 5 The final section presents a brief account of responses to the three main cholera threats after 1866 and the conclusion. The latter is presented under the following headings: the comparative history of cholera; continuity and change in experiences, official responses, and popular responses; and finally, cholera and sanitary reform.

1.2. CHOLERA AND PUBLIC HEALTH, 1830-1849.

1.2.1 EPIDEMICS, CHOLERA AND PUBLIC HEALTH REFORM BEFORE 1848.

With the disappearance of the plague at the end of the seventeenth century there began a period in which epidemics were not a major feature in British history. Despite frequent short term mortality crises, which were often the result of localised fever or smallpox outbreaks, public interest in the field of health beyond that of the individual was minimal and government action rare.⁴⁸ The situation changed dramatically in the late 1820s when the approach of the cholera pandemic provoked new interest in public health. The government was alive to the potential danger due to events that followed in the wake of the disease elsewhere and acted accordingly. Steps were taken to avert the threat and, when these failed, to contain the epidemic.

The responsibility for dealing with cholera was placed with the Privy Council, which was already responsible for the nation's rudimentary health administration.⁴⁹ On learning that cholera had reached Riga, where hundreds of cargo ships were preparing to sail to Britain, the Privy Council decided to introduce a system of quarantines, using the recently amended Quarantine Act of 1825.⁵⁰ From May 1831, ships sailing to Britain from infected ports were required to proceed to any one of several quarantine stations, where they were held to allow any disease to show, before being permitted

to dock.⁵¹ However, the knowledge that cholera had breached quarantines in other countries added to its reputation as a capricious and unpredictable disease and did little to reduce unease in Britain. To gather more information on cholera's etiology and mode of transmission, the Privy Council entered into correspondence with British doctors working in Russia and elsewhere. This was of little assistance as the replies received contained conflicting advice. To overcome this problem and to allay mounting anxiety, the Council elected to send a medical mission to St Petersburg to collect up to date information first hand. Meanwhile, reviving a precedent set in 1805 when yellow fever threatened, the Privy Council asked Sir Henry Halliday, President of the Royal College of Physicians, to advise on membership of a Central Board of Health (C.B.H.) whose role would be to make recommendations to the government on the best defences against the epidemic.⁵²

By June 1831 the C.B.H. was in operation.⁵³ Despite the uncertainty which surrounded cholera's etiology, the majority view on the Board was that the disease was contagious. Consequently, the government was advised to persist with quarantines. Mindful of the fact that cholera could penetrate even the most rigorous quarantine system, the Board also recommended that, in the event of the disease breaking out in Britain, the government should implement a number of additional measures, all based on contagionism. Internal quarantines were suggested, as was a system of expurgation, under which the sick would be removed to cholera hospitals, contacts to houses of refuge, and infected premises and their

contents fumigated or destroyed.⁵⁴ It was also proposed that a network of local boards of health, comprising magistrates and other dignitaries, should be established to administer these measures. Fearful of the likely reactions to such coercive measures, the government rejected much of this advice as insensitive and provocative.⁵⁵ The idea of internal quarantines was abandoned, but voluntary isolation of individual victims was recommended. This and the establishment of local boards of health to oversee preventive measures was accepted.

Cholera arrived in Britain in October 1831 at the port of Sunderland and quickly spread. By this time the Privy Council had changed the form of the C.B.H. Proven administrators and people with first hand experience of treating cholera in Europe replaced Halford's elite grouping. The new Board took a softer position on the questions of quarantines and coercion. Two factors, the apparent failure of existing controls and disruption of trade, fed the genuine medical uncertainty about the means of cholera's transmission, and persuaded the Board to relax external quarantine. A sizeable part of the medical profession now doubted contagionism, believing that cholera was spread through miasmas. Miasmatists held that cholera and other fevers were generated spontaneously in decaying matter and spread through the atmosphere, with individuals contracting the disease when they inhaled polluted or impregnated air. In 1832 the profession was temporarily united by the theory of 'contingent contagionism' which held that cholera had its origins in, and

was spread principally by miasmas, but could, in certain circumstances, be communicated from person to person.⁵⁶ As the epidemic worsened in the summer of 1832, the advice issued by the C.B.H. and the actions of local boards were consistent with this theory. As well as isolating the sick in cholera hospitals, ensuring speedy interment of the dead and fumigating infected premises, emphasis was placed on removing the 'sources' of the disease. Consequently, large scale cleansing and nuisance removal projects were undertaken by local boards of health and a 'Cholera Act' was passed by Parliament in February 1832 to speed up the creation of additional local boards and to enable them to raise sufficient funds to implement preventive measures. This was backed up by a stream of Orders from the Privy Council.⁵⁷

Historians agree that local boards operated with varying levels of commitment, but that the actions of even the most enthusiastic did little to curb the epidemic.⁵⁸ As an exercise in public health administration, however, the cholera arrangements of 1831-32 have been seen in a more favourable light. Arguably, the most significant development during the cholera crisis was the role of the government and its agencies. Whatever its motives and however faltering its actions, central government certainly took the lead in attempting to prevent cholera from arriving in Britain and, when this failed, to limit its effects. Although the state had demonstrated a willingness to intervene in health matters on previous occasions, its role had never extended beyond introducing quarantines and making contingency plans. Thus,

whilst the establishment of the C.B.H. and local boards were not without precedent, their operation on the scale seen in 1832 was.⁵⁹ Furthermore, local government actions, particularly once the epidemic was underway, were crucial, not least for the precedent set in central-local government relations.⁶⁰ The local boards of health which became the vehicle of action have been described by one historian as a 'major innovation of the first cholera epidemic'.⁶¹

In 1831-32 the complex and fragmentary structure of local government that existed in many towns represented a considerable obstacle to effective local action. The creation of a network of local boards of health was intended to provide a solution to this problem. When it became apparent that the work of boards was being hampered by other factors, the government and its agencies responded positively. The Cholera Act and a succession of Orders in Council strengthened the hand of local boards of health. The government's pragmatism was not confined solely to overcoming difficulties encountered at the local level. Account was also taken of shifts in medical opinion. That local boards of health were given the power to undertake cleansing duties and nuisance removal operations in the summer of 1832 was not so much the result of demands for this facility, but because medical opinion was swinging towards the miasmatic theory.⁶²

The separate analyses of Morris and Durey on the social response to the cholera epidemic of 1831-32 demonstrate that the level of sanitary activity during the cholera epidemic was

unprecedented. Many communities, including those in Yorkshire, were so unused to this type of intervention that, in the fraught circumstances of the day, they regarded it with suspicion and resentment and, on occasions, resisted it violently.⁶³ Indeed, 'from below' the actions of the authorities were often perceived as oppressive state action rather than beneficial measures. However, once the epidemic subsided, the level of public health activity fell away.⁶⁴ In the immediate aftermath of the epidemic the Cholera Act was revoked and the C.B.H. and local boards of health were disbanded. This resulted in the closure of cholera hospitals, dispensaries and houses of refuge, the end of free medical aid to the poor and termination of sanitary cleansing measures. Thus, within months of the epidemic waning, sanitary and medical preventive activity returned to former low levels, often nothing. Moreover, individuals at all levels of society, along with the government, the press and even sections of the medical profession, seemed anxious to forget the epidemic.⁶⁵

Consequently, issues of health and sanitation, which for two years had been subject to widespread attention and debate, quickly faded. As such, the cholera epidemic of 1831-32 can be characterised as a temporary crisis which met with a vigorous but temporary response. This viewpoint is reinforced by the consensus amongst historians which holds that few lessons were learned from the epidemic. There is no evidence of cholera leading to lasting reforms or improvements in public health arrangements. As Morris put it, in the decade

after the epidemic, 'cholera played no part in social policy-making', hence the notion that cholera was the sanitary reformers' best friend is found wanting.⁶⁶

This verdict is too harsh as it can be shown that the first cholera epidemic had indirect influences on the creation of public health policy, especially as it influenced a number of people who were to play an important part in the public health campaigns of the 1840s. At the local level a number of individuals strove to keep the public health issue on the political agenda. The most influential of these were based in the growing industrial towns of the north of England, the most celebrated being Robert Baker, a Leeds surgeon. Acting at the behest of Leeds Town Council in 1833, Baker produced his now famous report on the Leeds epidemic, which included a 'Cholera Map' showing that the epidemic had been most severe in those districts where environmental conditions were worst.⁶⁷ In the short term Baker's report had little effect. However, some six years later he produced a statistical survey, which re-emphasised the relationship between poor sanitary conditions and ill health and it was this document which was part of the inspiration for the Leeds Improvement Act, 1842.⁶⁸

The use of statistics to illustrate the link between insanitary conditions and urban disease proved to be an invaluable weapon in the campaign for reform and was exploited by reformers at both national and local levels. Sanitary reports and statistical surveys, like Baker's, were produced and compiled in several other towns by local statistical

societies and medical men.⁶⁹ At national level, Edwin Chadwick, Secretary to the Poor Law Commission, played a vital part in initiating sanitary surveys and attracting publicity for what eventually became the 'public health movement'. Chadwick was amongst the first to recognise the value of statistics. Although his earlier proposals for including improved public health provision as a part of the Poor Law Amendment Act, 1834 had been rejected, he was successful in persuading Parliament to include Clauses requiring registrars to include the cause of death in the Registration of Deaths Bill, 1836.⁷⁰ When the Bill became law, he also persuaded the Registrar General to appoint a skilled statistician, William Farr, as a compiler of abstracts. In the Annual Reports of the Registrar General, Farr used statistical data, and particularly comparative statistics, to demonstrate that death rates in the most insanitary towns could be reduced to the same level as that for 'Healthy Districts' if the government took steps to introduce comprehensive sanitary measures.⁷¹ Statistics, it was argued, were 'irrefutable facts' which could not be disputed by opponents of reform.

Acting in an official capacity, Chadwick enlisted the help of three medical men, James Kay, Neil Arnott and Thomas Southwood Smith in 1838, to examine conditions in some of London's worst fever districts.⁷² Their work concluded that the moral shortcomings of the poor were largely to blame for the high incidence of fever, but that the poor would not be in a position to help themselves until their living conditions were improved. To achieve this, it was argued, sanitary

powers should be given to local Poor Law Guardians.⁷³ The link between ill health, poverty and the environment was central to the public health movement's quest for reform. Chadwick and other reformers argued that the filthy and overcrowded conditions in the new urban environment were responsible for the generation and spread of urban diseases. Experience showed that the incidence of these diseases - diarrhoea, dysentery and typhoid, which many contemporaries referred to under the generic term 'fever' - was highest wherever insanitary and overcrowded conditions existed. Increasingly, therefore, 'fever' was regarded as an urban phenomenon, and was blamed for debilitating or killing the poor. It followed that because urban diseases claimed the lives of family breadwinners or left people unable to work, there was a direct link between them and the level of pauperism.⁷⁴ Hence, for Chadwick, sanitary reform was vital in order to keep local poor-rates to a minimum.

Closely linked to the view that disease caused poverty were the vexed and intimately related questions of the specificity, origin and spread of urban disease. After the first cholera epidemic the medical profession was once again divided over these issues.⁷⁵ The miasmatic theory gained wider acceptance in the late 1830s and was openly supported by sanitarians like Southwood Smith who declared that the higher rates of mortality in urban areas were the result of 'effluvial poisons' rather than 'greater misery'.⁷⁶ Chadwick and his disciples were staunch believers in this theory and were convinced that disease was propagated amongst the poor by

atmospheric poison resulting from filth, overcrowding, lack of drainage and defective water supply. They also rejected the notion of specific disease entities, arguing that diarrhoea, dysentery and typhoid were forms of 'fever' whose generation was the result of certain atmospheric conditions.⁷⁷ Thus, Chadwick and like minded sanitarians argued that comprehensive sanitary reforms would prevent the generation and spread not only of 'fever', but also of epidemic diseases like cholera.⁷⁸

With the publication of a number of reports, articles and surveys which highlighted the squalor and unhealthiness of the new, yet quickly deteriorating, urban environment, not to mention the link between disease and pauperism, pressure for some kind of action grew around 1840. After the investigation into the London fever epidemic by Kay, Arnott and Southwood Smith, the government decided that an extended enquiry was necessary before further action could be taken. Chadwick shouldered the responsibility for this project and, in addition to making his own investigations, drew upon reports and evidence supplied by a number of local sanitary reformers. In 1842 Chadwick's Report of an Inquiry into the Sanitary Conditions of the Labouring Population of Great Britain was published.⁷⁹ This epic work contained lurid details of the whole gamut of health problems and moral degradation which existed in urban areas. Significantly, it also set out a coherent programme of reform legislation which, following the precedent of the 1831-32 cholera epidemic and, more recently, the Poor Law and Factory Acts, stressed the need for local action under central guidance. As an exercise in propaganda,

the Chadwick report was an undisputed and immediate success. The Report was widely read and, more importantly, had a profound impact on middle class opinion which was shocked by many of its revelations and moved by its moralistic message. Whilst the report undoubtedly brought the public health question to the fore, it did not prompt an immediate legislative response.

After the publication of Chadwick's report, a public health movement coalesced and gathered momentum. In 1843 the Home Secretary set up the first of two Royal Commissions on the Health of Towns, both of which thoroughly investigated public health conditions and reiterated the case for amelioration. In 1844 the Metropolitan Health of Towns Association was established, its chief aim being to press for reform. Members of the Association included utilitarians and several eminent medical men, various aristocrats including Earl Grey and Viscount Morpeth, and members of the Young England group such as Disraeli.⁸⁰ Health of Towns Associations were quickly established in many provincial centres and, within a matter of months, were functioning as 'one of the most effective pressure groups in British history'.⁸¹

As the composition of the Metropolitan Health of Towns Association indicates, the public health movement comprised individuals from a variety of backgrounds and with varied interests. Similarly, it was a fusion of metropolitan and provincial factions which sought to influence government at

both national and local levels. The reformers were motivated by a number of factors. Some, like Lord Ashley, were influenced by humanitarianism, others were Evangelicals, or Tory paternalists. In the provinces, many were medical men with close social and working relationships with the poor. Others saw the public health movement as a vehicle for overcoming their social marginality.⁸² However, utilitarianism was arguably the most decisive factor. This was certainly the case with those individuals like Southwood Smith and, more crucially, Chadwick, who exerted the greatest influence. Chadwick's unswerving belief in Benthamite philosophy equipped him with the means to counter even his most severe critics.

That it took the public health movement several years to persuade government that reforms were both desirable and necessary, was in part a reflection of the opposition to reform. Just as reformers were motivated by different influences and factors, so too were their opponents.⁸³ Many people regarded state intervention in any sphere of social or economic life as unnatural and pernicious. Others were frightened it would lead to increased centralisation and consequent loss of local autonomy. Even more serious reservations and objections arose from the question of how the programme of reform envisaged by Chadwick and his associates, with its massive sanitary engineering projects, would be financed. Arguments for 'economy' loomed large in the debates which eventually accompanied the introduction of legislation at national and local level. To an extent, Chadwick was able to pre-empt this form of criticism with a persuasive line of

argument which embodied the basic tenets of utilitarianism. He asserted that reforms in public health were necessary to ensure the greater happiness of the greatest number at least cost. With reference to the specific question of finance, Chadwick readily admitted that the public would have to pay for improvements in sanitary provision through local rates. However, he went on to explain that because reforms would eliminate disease, the main cause of poverty, they would lead to a reduction in pauperism and eventually a reduction in local rates. Thus the reforms would be self-financing.

In 1846 the pressure for reform bore fruit when the government passed the Nuisance Removal Act (N.R.A.) which gave magistrates the power to prosecute those responsible for a variety of sanitary nuisances, and the Public Baths and Washhouses Act, which permitted local authorities to provide these facilities. In 1847 followed the Town Improvement Act, the Water Act and the Cemeteries Act which respectively empowered local authorities to provide drainage, water supplies and public cemeteries.⁸⁴ However, the great landmark has always been seen to be the Public Health Act, 1848 which historians have argued was the great achievement of the early public health movement.

The Act aimed to work through local boards of health, which were to be given responsibility for the construction and management of sewerage and drainage systems, wells and water supplies, for removal of nuisances, for the control of cellar dwellings and other property unfit for habitation, and for the

provision of burial grounds, parks and public baths.⁸⁵ The Act also established the G.B.H. - with Chadwick at its head, whose role was to sanction the formation of local boards and provide advice. Those historians who have examined the Act's impact on sanitary reform all agree that it did not live up to expectation.⁸⁶ This was largely due to the permissive nature of many of its Clauses and the fact that the Board's powers were poorly defined. Even in those towns where the death rate exceeded twenty three per thousand of the population and the Board could demand the establishment of local boards of health, it was unable to guarantee that local authorities would use the powers available to them.⁸⁷ A deep seated local suspicion and resentment of central authority further undermined the Act and the Board.

Several historians have pointed out that the burst of legislation after 1846 coincided with the renewed threat of cholera. Some have argued the case for a direct connection between the new pandemic and the passage, after two unsuccessful readings, of the Public Health Act.⁸⁸ On close inspection the evidence suggests that whilst cholera was instrumental in giving Parliament a greater sense of urgency, this resulted in the passage of legislation that was incomplete and poorly thought out.⁸⁹ From this perspective, far from being the sanitary reformers' best friend, cholera may actually have hindered their efforts by weakening the 1848 Act. One of the ironies surrounding the 1848 Act was that as it was intended to provide a gradual solution to the problems of fever and other epidemic and endemic diseases, it was

poorly designed to meet the exigencies of the new cholera threat when that erupted in 1848.

The G.B.H. was established by the time cholera arrived. For this epidemic no special legislation was deemed necessary, but if there was an equivalent of the Cholera Act 1832 it came in the form of the 1848 Nuisance Removal and Disease Prevention Act (N.R.D.P.A.), which was a refinement of the N.R.A., 1846, which had itself been passed to help combat the temporary crisis of local fever outbreaks.⁹⁰ The N.R.D.P.A., which could only be put into effect by an Order in Council, allowed the G.B.H. to instruct local authorities, especially Poor Law Guardians, to abate nuisances and provide medical treatment for the sick. However, a number of factors prevented the Board from meeting its main objective which was securing preventive action at the local level.⁹¹ The Act did not allow the G.B.H. actually to create local boards of health. Instead of consolidating cleansing functions under one authority, the Act merely gave superintending powers to Boards of Guardians, allowing them to act in default of other local authorities. Thus, when the N.R.D.P.A. was put into force in the autumn of 1848, preventive action at the local level often became the responsibility of Boards of Guardians, bodies committed to the principle of 'less eligibility', and to whom the idea of meeting the cost of sanitary and medical preventive measures was often an anathema. This situation, contrasted sharply with that in 1831-32 when preventive measures at the local level were delegated to boards of health created specifically for the purpose of implementing

preventive measures. The chances of the G.B.H. securing uniform and comprehensive action at the local level were further undermined by the fact that it did not possess the powers to compel local authorities to implement either the provisions of the N.R.D.P.A. or any other regulations issued.⁹²

The inherent weaknesses of the N.R.D.P.A. were not the only factors which jeopardised the G.B.H.'s preventive strategy. As numerous studies have confirmed, the Board itself was hugely unpopular with many local authorities and rate-payers, largely as a result of general hostility towards central power. Local authorities and rate-payers were not alone in viewing the Board with suspicion. Many medical men, and especially those in the provinces, were implacably opposed to the Board, fearing that it would force many junior medical men into public service where they would be exploited.⁹³ Relations between the Board and the medical profession were also damaged by Chadwick's failure to hide his contempt for the profession and particularly those medical men who disagreed with the Board's ideas on disease causation.⁹⁴ All these factors, coupled with its inexperience, ensured that the Board's first eighteen months proved to be amongst the most difficult during the ten years of its existence.

In many respects, developments in individual towns and cities paralleled those which occurred nationally, with reformers using statistical and sanitary surveys to highlight the need for sanitary intervention on the part of local

authorities. The West and East Riding towns were fairly typical. Works similar to those produced by Robert Baker in Leeds were published by George Calvert Holland in Sheffield in 1842, by the Sanatory Committee of Bradford Woolcombers in 1845 and, under threat of cholera, by the Sanitary Committee of Hull Medical Society in 1847.⁹⁵ Agitation for reform at the local level met with different levels of success in each locality. As early as 1842, the Leeds Improvement Act was passed, giving Leeds Town Council wide ranging powers to improve public health conditions.⁹⁶ Sheffield Town Council appointed a Health Committee in 1846, passed a bye law in 1847 to tighten public health regulations and in 1848 commissioned its own sanitary survey of the town.⁹⁷ Less significant developments occurred in Bradford and Hull. Following incorporation in 1847, Bradford Town Council established a sanitary committee and passed a bye law empowering it to deal with minor nuisances.⁹⁸ In Hull, the only significant improvement came in 1845 when a new and more plentiful supply of water was obtained from the River Hull.⁹⁹

In terms of producing results, many of the reforms and improvements of 1840s at the local level proved to be inadequate or disappointing. The Leeds Improvement Act, in particular, failed to live up to expectation. Hennock argued that although it ranked as 'one of the pioneering measures in the history of public health in England', thirty years or so after it was passed 'the contrast between what the comprehensive ideas embodied in the Act and what had actually been achieved was still great enough to cause comment'.¹⁰⁰

By 1848, sanitary reformers, both nationally and locally, had produced a lot of words (reports, legislative enactments, articles, blue books), but little action. It took a second cholera epidemic to turn words into action; whether this was temporary or permanent action remains to be seen.

1.3. THE CONTEXT: THE FOUR TOWNS

1.3.1. LEEDS

By the 1840s, Leeds was one of England's largest and most important manufacturing towns. Although its growing prosperity was due in part to the expansion of its engineering, leather, mining and dressmaking industries, the mainstay of the economy was the manufacture and finishing of woollen cloth. The importance of the textile industry was such that in 1841 it provided employment for almost 40% of the town's work force.¹⁰¹

The success of the Leeds textile industry was due in part to the willingness of a handful of local millowners to experiment with technological innovations. Mechanisation of the industry was first attempted by Benjamin Gott at the end of the eighteenth century. Despite the success of Gott's ventures - he opened the world's first fully integrated woollen mill in 1826 - he had few imitators for several decades. From 1830 onwards, however, the development of reliable steam driven machinery persuaded ever growing numbers of manufacturers that centralised, mechanised production would significantly increase output and profitability. Thereafter, the factory took over from the small shop as the typical unit of production.¹⁰²

The transition from traditional or domestic to factory based production after 1830 played a major part in deepening the divisions between capital and labour. At mid-century

James Hole, an Owenite and fierce social critic, described how in Leeds, 'Class stands opposed to class'.¹⁰³ Those historians who have examined social relations in mid-nineteenth century Leeds are in broad agreement with Hole, arguing that a clearly defined class structure had developed.¹⁰⁴ The only debate in this area has been over why the town quickly lost its reputation as an early 'centre of Radical and working class movements' and, more specifically, why Chartism failed to achieve the mass involvement seen in other parts of the West Riding.¹⁰⁵

The expansion of the textile and other manufacturing industries after 1800 attracted large numbers of migrants to Leeds. This, coupled with the surplus of births over deaths within the town, led to a dramatic rise in the town's population. Census returns indicate that the number of people living in the borough increased from 53,000 in 1801 to 83,000 in 1821 and 172,000 in 1851.¹⁰⁶ The majority of the town's population lived in the heavily industrialised, centrally located in-township; in fact, the 1851 census showed over 100,000 people, approximately 60% of the borough's population, lived there.¹⁰⁷

Inevitably, the concentration of industry and vast numbers of people into such a small geographical area led to serious environmental problems. Severe overcrowding, industrial pollution, lack of basic amenities and rudimentary sanitation combined to make life extremely uncomfortable for all citizens and positively dangerous for the majority. The

appalling sanitary conditions which blighted the town provided an ideal environment in which endemic diseases such as fever and tuberculosis and epidemic diseases like smallpox and influenza could thrive. This was reflected in the town's persistently high death rate.

Cholera first visited Leeds in 1832, when it claimed the lives of over seven hundred people. Predictably, the overcrowded and squalid in-township bore the brunt of the mortality.¹⁰⁸ The epidemic provoked different forms of behaviour from the middle and working classes. Local officials responded to the threat of cholera by mounting a cleansing campaign of unprecedented intensity, clearing away filth and nuisances, whilst the local elite reacted in traditional fashion, raising a voluntary subscription for the relief of the poor.¹⁰⁹ The response of the working classes to cholera and the measures taken to combat it was relatively muted. Angry scenes, sparked by the implementation of medical precautions, were reported but rioting and disorder on the scale seen in other towns and cities did not develop.

Baker's famous investigations of the epidemic failed to make an impression on the ruling elite and nothing was done immediately to improve sanitary conditions. Towards the end of the 1830s, however, Baker's second report, this time at the behest of the Council, was a major stimulus to the Improvement Act noted above.¹¹⁰

1.3.2. SHEFFIELD

During the first half of the nineteenth century the Sheffield steel industry expanded to such an extent that at mid-century 90% of British steel and 50% of European steel was produced in the town.¹¹¹ These eye-catching statistics prompted one contemporary observer to comment that 'Sheffield is as completely the metropolis of steel as Manchester is of cotton or Leeds of woollens'.¹¹² What made Sheffield's pre-eminence in steel making all the more remarkable was the fact that the industry was little more than an adjunct to the town's largest industrial sector, the lighter metal trades, which included the manufacture of cutlery, silverware and agricultural tools.¹¹³ That four times as many people were employed in the light trades as the heavy trades in 1850 provides a clear indication of their relative importance. Thus, as well as being Europe's biggest producer of steel by the 1840s, the town was also 'the great seat of the cutlery and other hardware manufactures'.¹¹⁴

Sheffield's economic and industrial development between 1800 and 1850 was particularly noteworthy because it was achieved without the assistance of fundamental changes in the methods, organisation or relations of production. One historian has recently pointed out that both the heavy and light trades developed 'mass production by traditional methods'.¹¹⁵ Just as new production techniques failed to supplant traditional methods and specialisations, the large factory failed to replace the small workshop as the main unit of production. As late as 1850, there were no more than

fifteen firms employing more than a hundred workers and in the light trades, where traditional specialisations were particularly prevalent, 'the concept of a self contained factory ... was alien'.¹¹⁶

The rapid growth of labour intensive industries after 1800 lured thousands of migrants to the town.¹¹⁷ As a result, its population grew threefold from 45,000 in 1801 to 135,000 in 1851. As was the case in the other fast growing industrial towns, the vast majority of citizens had to contend with atrocious living conditions, grinding poverty and the constant threat of disease.

Whilst historians recognise that Sheffield shared much in common with other large towns, they point out that its social structure and relations differed significantly to those in places like Leeds, Bradford and Manchester. For a variety of reasons - these are explored later - the divisions between capital and labour developed slowly in Sheffield. As late as 1843 a local man reported that it was still 'not easy to draw the line in Sheffield between men and masters'.¹¹⁸ Whilst Sheffield society was, as Pollard pointed out, relatively homogeneous until after 1850, strains did develop between the different classes. This was the case in 1832 when cholera visited the town.

The first epidemic killed over four hundred people, mainly in the slum districts on the banks of the rivers Don and Sheaf.¹¹⁹ The local authorities attempted to thwart the

disease by hastily implementing sanitary and medical preventive measures. As was the case elsewhere these measures were resented by the poor. Consequently, large sections of the local community were gripped by panic whilst others vigorously resisted 'interventionist' medical precautions. When the epidemic subsided the extraordinary measures were abandoned and the town's sanitary administration and social relationships returned to 'normal'. Despite incorporation in 1835 there were no significant administrative innovations in Sheffield's sanitary arrangements until the mid-1840s when working and middle class agitation for reforms began to pay modest dividends.

1.3.3. HULL

During the first half of the nineteenth century Hull had established itself as Britain's third busiest port in terms of volume of trade, surpassed only by Liverpool and London.¹²⁰ The rapid growth of the town and port was very closely connected to the industrialisation of its north midlands and West Riding hinterland, with Hull acting as a vital trade link with the countries of northern Europe. This was evident in the type of goods traded through the port. During the first half of the century ever increasing volumes of raw materials for industry, such as bar iron, timber, wool, flax, rags and linseed, and various foodstuffs required to feed the burgeoning population of the industrial north were all imported and transhipped inland by road, waterways or, after 1840, railways. The import trade was complemented by a flourishing export trade, consisting principally of woollen

and cotton yarn, finished textile goods, machinery and other capital goods.¹²¹ Towards the middle of the century passenger traffic - made up mainly of European emigrants travelling to America - also began to make a contribution to the local economy, providing revenue for shipping and railway companies and hoteliers. The importance of docking and shipping industries was such that in 1851, they provided work for over 7,000 men, just less than a tenth of the town's total population.¹²²

Hull's economic aggrandisement was not due solely to trade. Throughout the eighteenth and early nineteenth centuries, shipbuilding had been a major source of employment and although the industry went into decline after 1830, it still provided work for over five hundred men in 1851.¹²³ By mid-century a number of new industries had been introduced, including fishing and fish curing, seed crushing and flour milling, engineering, and the manufacture of paint and chemicals. Whilst these 'new' industries were poised to make a significant contribution to Hull's economic fortunes in the second half of the century, they were still embryonic in 1850. There was, however, one notable exception to this pattern - the cotton industry - which was first started in the 1830s and, by 1851, provided employment for over 2,000 people in five fully mechanised mills.¹²⁴ The industry was doubly exceptional as not only was it the only sizeable manufacturing industry, but it was also the only sector in which large employers predominated.

The growth of the port and the development of new industries in the period 1800-1850 attracted large numbers of people from places as far away as Ireland and Lancashire.¹²⁵ As a result, the town experienced a rapid rise in population from 29,000 in 1801 to 84,000 in 1851. At mid-century the majority of the population lived in either the overcrowded Old Town quarter or the recently built tenements and courts of Sculcoates, the Mytons and the Groves. Contemporary descriptions of these areas reveal that they were all blighted by the typical problems of rapid and unplanned urbanisation.¹²⁶ Further health problems were posed by Hull's vulnerability to ship-borne infections; thousands of foreign seamen visited the town each year and were accommodated in the town's notoriously unhealthy lodging houses.

By the mid-century the town's social structure was in a state of flux. The working class was made up of several disparate groups. A relatively small industrial proletariat was emerging from the factory based cotton industry, but the majority of workers were employed in sectors associated with the port, where employment was precarious. In addition to having to contend with cyclical unemployment, these workers were also bound up in a system of casual employment. Here, the cash nexus operated in its crudest form, work was irregular, wages poor and employers remote. For this section of the working class, opportunities for effective political organisation were few; indeed, it was not until the 1860s that the town's dockers were able to stage effective action.¹²⁷ Not surprisingly, the working class did not develop a

reputation for radicalism. Hull did have a sizeable middle class comprised of merchants, professionals and a few large scale manufacturers. Political power lay firmly with this capitalist elite and in the 1830s and 1840s was often used to resist pressure for reforms of any description.

In 1832 around three hundred lives were lost to cholera.¹²⁸ The epidemic created something of a dilemma for the town's ruling elite as the government's system of prevention - quarantines - threatened severe disruption of trade and, for that matter, employment. In the event, quarantines and other public health measures were implemented. The crisis passed off without serious disturbances and was quickly forgotten by all but a handful of local medical men who conducted a vigorous debate amongst themselves about the best methods of treating the disease.

1.3.4. BRADFORD

Between 1800 and 1850 Bradford grew from being little more than a relatively minor outpost of the West Riding textile industry into what has been described as 'one of the most remarkable phenomena of the British Empire'.¹²⁹ This description owes much to the two most salient features of the town's history in the first half of the nineteenth century: its emergence as a manufacturing centre of international repute, and its spectacular eightfold increase in population.

Throughout the entire nineteenth century, growth and prosperity were completely dependent upon the expansion of the

worsted industry. By 1830, Bradford was already Britain's largest producer of worsted cloth and, from this position, it quickly overtook its erstwhile rivals, Leeds and Halifax, to become the centre of the industry's finishing and marketing sectors by 1850.¹³⁰

The rapid expansion of the worsted industry was largely due to technological and organisational changes in methods of production and the willingness of local manufacturers to experiment with fibres other than wool.¹³¹ Mechanisation played a vital role in stimulating the growth of the local economy. As was the case in other branches of the textile industry, spinning was the first part of the manufacturing process to be transformed by the introduction of steam powered machinery. By 1830 the whole of this sector had been fully mechanised. With the introduction of reliable powerlooms after 1830 the shift towards centralised, factory based production gained momentum with the result that by 1840 mechanised weaving had become the norm.¹³² By the mid-1840s woolcombing was the only part of the manufacturing process which had not been mechanised. Following the introduction of Lister's highly successful 'nip-machine' in 1845, this last stronghold of domestic production succumbed. Thus, in just over fifty years the transition to the fully fledged factory system in the worsted industry was complete. By the fifth decade of the nineteenth century Bradford more than any other town in the West Riding could lay claim to being the classic town of the industrial revolution.

Throughout the period 1800-1850 people flocked to the town in the hope of finding employment as either domestic producers or factory operatives. This led to an explosive increase the population from just 13,000 in 1801 to 104,000 in 1851, a rate of growth which was quite exceptional even by contemporary standards.¹³³ The almost total reliance on a single branch of the textile industry left the town vulnerable to frequent trade depressions with the result that mass unemployment was common. The problem of poverty was exacerbated by the displacement of thousands of handloom weavers. Not surprisingly, the twin processes of industrialisation and urbanisation created environmental conditions in which disease was ever present. As a result, the first half of the century saw a steadily rising mortality rate and very high levels of infant and child mortality.¹³⁴

The growth of the worsted industry and the manner in which it was achieved, had a number of implications for the town's social structure and relationships. Predictably, Bradford was an overwhelmingly working class town, with over a quarter of its population working as factory operatives in the worsted industry.¹³⁵ The lot of Bradford's labouring classes was particularly hard as the town did not have a sizeable or well established middle class to cushion the blow of frequent trade depressions through traditional charitable or philanthropic gestures. The town's working class developed a reputation for an unruliness which later developed into radicalism. As Briggs has noted, the famed 'propensity to riot' was far more marked in Bradford than in neighbouring

Leeds.¹³⁶ Indeed, throughout the period 1830-1848 social and political tensions ran high and led to serious clashes between operatives and the forces of law and order on numerous occasions. Not surprisingly, the town was a major centre of physical force Chartism and the scene of serious rioting in 1848. According to one historian, such disturbances, along with frequent industrial disputes, were clear manifestations of what contemporaries termed 'the capital-labour issue'.¹³⁷

Surprisingly, perhaps, cholera failed to take hold in Bradford in 1832. The disease was reported to have claimed the lives of only fifteen people. However, the threat of cholera did provoke the local authorities into rare if limited action. Vigorous health measures were not seen again until fever reached epidemic proportions a decade and a half later.

FOOTNOTES TO PART 1.1

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6. C.E. Rosenberg, The Cholera Years: The United States in 1832, 1849 and 1866, 1963.
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8. M. Durey, The Return of the Plague: British society and the cholera 1831-32, 1979; R.J. Morris, Cholera 1832; The Social Response to an Epidemic, 1976. For studies of local cholera epidemics in 1831-32 see: P. Swan, 'Cholera in Hull, 1832', Journal of Regional and Local Studies, 3, (1), 1983, 2-11; S.T. Miller, 'Cholera in Sunderland 1831-32', *ibid*, 12-18; C.J. Morgan 'The Leeds Cholera Epidemic of 1832', *ibid*, 19-26.
9. Rosenberg, op cit note 6 above, p. 1.
10. Durey, op cit note 8 above, especially chapters 5, 6 and 7.
11. Ibid., p. 1.
12. Morris, op cit note 8 above, p. 17.

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14. R. Evans, 'Epidemics and Revolutions in Nineteenth Century Europe', Past and Present, 28, 1988, 123-147.
15. Ibid, 146.
16. Durey, op cit note 8 above, pp. 247-64.
17. G. Kearns, Cholera, Society and Space: Some reflections on cholera epidemics as a topic for comparative history, 1986, pp 1-7; W. Luckin, 'The final catastrophe: Cholera in London, 1866', Medical History, 21, 1977, 32-42; W. Luckin, A social history of the Thames in the nineteenth century, 1986, pp. 70-96; A.A. MacLaren, 'Bourgeois ideology and Victorian philanthropy', in A.A. MacLaren, Social Class in Scotland; Past and Present, 1976, pp. 36-55; N. Longmate, King Cholera: Biography of a Disease, 1966; N. Calcott, 'The challenge of cholera: the last epidemic in Newcastle upon Tyne', Northern History, 20, 1984, 167-86.
18. R. Evans, Death in Hamburg; Society and Politics in the Cholera Years 1830-1910, 1987.
19. Morris, op cit note 8 above, p. 17.
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21. F F. Cartwright, op cit note 1 above p. 93-113. J.L. Brand, Doctors and the State; The British Medical Profession and Government Action in Public Health, 1965, p. 45. Brand argues that cholera was 'one of the most effective stimuli of the early public health movement' and that it had been of 'great service to the advancement of English sanitation'.
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23. Cartwright, op cit note 1 above, p. 106.
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 28. O. MacDonagh, 'The Nineteenth-Century Revolution in Government: A Reappraisal', Historical Journal, 1, 1958, 58-67. For similar 'Whiggish' views see: R. Lambert, 'Central and local relations in mid-Victorian England: the Local Government Act Office, 1858-71', Victorian Studies, 5, 1962, 149. Lambert argues that progress in the field of public health was attributable to 'the self sustaining and self generating impulse of administration itself'. Cf. D. Fraser, The Evolution of the British Welfare State; A History of Social Policy since the Industrial Revolution, 2nd edition, 1984, Preface.
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 49. Durey, *ibid.* Durey argued that at this time Britain lacked a centralised system of public health administration, the only state medical agencies being the Commission in Lunacy and the Vaccination Board.
 50. Morris, op cit note 8 above, p. 24.

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51. Swan, op cit note 8 above p. 6.
 52. Morris, op cit note 8 above, pp. 25-26.
 53. Cartwright, op cit note 1 above, p. 99.
 54. Ibid, p. 100.
 55. Morris, op cit note 8 above, p. 31.
 56. Durey, op cit note 8 above, pp. 115-118.
 57. Morris, op cit note 8 above, p. 73.
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 59. Cartwright, op cit note 1 above, pp. 97-101. Cartwright states that over 1,200 Boards of Health had been created in the United Kingdom.
 60. Ibid, p. 99.
 61. Morris, op cit note 8 above, p. 31.
 62. Durey, op cit note 8 above, pp. 78-79.
 63. Stevenson, op cit note 13 above, p. 245.
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 81. Longmate, op cit note 17 above, p. 150; for a similar assessment see: Brockington, op cit note 1 above, p. 37.
 82. I. Inkster, 'Marginal Men: Aspects of the Social Role of the Medical Community in Sheffield 1790-1850', in Woodward and Richards, op cit note 3 above, pp. 143-145.
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 84. Wohl, op cit note 70 above, pp. 148-149.
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 86. Fraser, op cit note 28 above, pp. 70-1. Fraser says that the Act was 'generally ineffective in the short term'.
 87. Cartwright, op cit note 1 above, p. 105.
 88. Ibid, pp. 104-105.
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128. Swan, op cit note 8 above, 8-10.
129. Briggs, op cit note 32 above, p. 140.
130. G. Firth, 'Bradford Trade in the Nineteenth Century', in D.G. Wright and J.A. Jowitt, eds., Victorian Bradford, 1982, pp. 9-14.
131. Ibid, p. 15.
132. E.M. Sigsworth, 'Bradford and the Great Exhibition, 1851', Bradford Textile Journal, 1950-51, 43-49.
133. E.C. Midwinter, Victorian Social Reform, 1968, p. 5.
134. B. Thompson, 'Public Provision and Private Neglect: Public Health', Wright and Jowitt, op cit note 128 above, p. 137, Thompson states that in the 1840s over 50% of deaths in Bradford occurred amongst children of less than five years old.
135. Firth, op cit note 128 above, p. 14.
136. Briggs, op cit note 32 above, p. 149.
137. D. Wright, 'The Second Reform Agitation 1857-67', in Wright and Jowitt, op cit note 128 above, p. 165.

PART 2

1848-49

Part 2 is presented in two sections: 2.1, 2.2. and 2.3, followed by their footnotes on pages 135-48; and Parts 2.4, 2.5 and 2.6, followed by their footnotes on pages 214-25.

2.1. INTRODUCTION

Britain's second cholera epidemic was part of a pandemic which again originated in the Indian sub-continent. It first appeared in epidemic form in India during the hot season of 1845 and spread quickly through the Punjab and into Afghanistan.¹ The disease quickly moved westwards, reaching several parts of the Middle East, including Aden, Persia and Asiatic Turkey in 1846. By September 1847 cholera had reached Moscow, where its progress was temporarily checked by the onset of the harsh Russian winter. The westward march resumed in the spring of 1848. By June it had reached St. Petersburg and Berlin, and was also present in Finland and Sweden. Three months later, the disease arrived at Hamburg and Rotterdam, both of which were just three days sailing time from Britain's east coast ports. Little over a month later it crossed the North Sea.

The 1848 cholera season began, apart from a number of 'imported' cases, at Southwark in London on 22 September, but the General Board of Health (G.B.H.) did not issue its 'First Notification of Cholera' until 5 October, following simultaneous outbreaks at Newhaven and Edinburgh. Throughout the autumn and winter Scotland bore the brunt of the epidemic, with Glasgow, Edinburgh and industrial Lanarkshire experiencing serious outbreaks.² Early in 1849, however, there was a marked decline in incidence, presumed to be due to colder weather; this trend continued such that by April it seemed that the epidemic was over.

Hopes that Britain might have escaped a serious epidemic were shortlived. In May 1849, cholera struck again in towns as far apart as Gloucester and Durham. Within a month, the disease had spread to such an extent that the G.B.H. admitted that cholera had reappeared 'in various and distant places in England, Wales and Scotland'.³ By the end of June, many large towns including Manchester, Plymouth and Bristol were affected and, ominously, all attempts to arrest its progress were failing. During the summer of 1849 deaths mounted and rapidly passed the total mortality for the 1831-32. However, as previously the crisis ended abruptly, yet by the end of the year over 60,000 lives had been lost.

The government response was that the epidemic was not a national problem. Committed as it was to the miasmatic theory of disease causation, the G.B.H. believed that there was no need to police national boundaries with quarantines. Indeed, the Board believed that outbreaks were due to specific local sanitary and environmental conditions.⁴ This view of the disease was mirrored in the legislation under which it was fought. Most of the powers of the Nuisance Removal and Disease Prevention Act, 1848 (N.R.D.P.A.), were discretionary and vested in local authorities whose structure and functions were extremely varied. It is, therefore, wholly appropriate to consider the 1849 epidemic at the local level.

The epidemic of 1848-49 caused significantly higher levels of mortality in the large towns of the East and West Ridings than the 1832 epidemic, except in Sheffield.

TABLE 2.1

DEATHS FROM CHOLERA IN THE FOUR LARGE TOWNS OF YORKSHIRE, 1832 AND 1849

TOWN	1831-32	1848-49
Hull and Sculcoates	300	1,834
Leeds and Hunslet	700+	2,323
Bradford	15	426
Sheffield and Ecclesall	400+	150

Sources: Parts 1.3.1,2,3 and 4. and Report of the Cholera Epidemic of 1866 in England, 1868.

The approximate figures for 1832 are said to represent significant underestimates, due to diagnostic uncertainties and low rates of reporting, yet the same reservations apply to the later data despite improvements in medicine and civil registration in the intervening years.⁵ The mortality rates in 1849 varied between the towns (see TABLE 2.2), with Hull and Leeds experiencing very high levels.

TABLE 2.2

TOTAL DEATHS AND MORTALITY RATES IN THE FOUR LARGE TOWNS OF
YORKSHIRE, 1849

TOWN	TOTAL DEATHS	DEATHS PER 10,000 POPN.
Hull and Sculcoates	1,834	200
Leeds and Hunslet	2,323	125
Bradford	426	28
Sheffield and Ecclesall	150	12
England (average)	53,293	30

Source: Report of the Cholera Epidemic of 1866 in England,
1868.

In 1831-32, local cholera outbreaks or epidemics followed a characteristic pattern.⁶ Beginning in undramatic fashion with sporadic or isolated cases appearing over some weeks, the disease spread slowly but persistently for a number of weeks before entering an explosive phase, in which the number of cases and deaths escalated dramatically. Once the epidemic had 'peaked', however, it quickly went into decline and within a matter of weeks had completely disappeared.

In 1849 local epidemics followed a similar course. However, establishing precisely when the epidemic began in a

particular locality is problematic. The events of 1849 confirm that the beginning of a cholera epidemic was rarely a clear cut event, with a period of uncertainty and confusion preceding official and public recognition. This was due firstly to the occurrence of isolated or 'imported' cases amongst an otherwise 'healthy' indigenous population. Several such cases, usually in people who had developed cholera symptoms after returning home from a visit to an infected area (or in the case of Hull, from an infected country), were reported in each of the four Yorkshire towns. Although these often prompted scares, they were usually played down by medical men and local authorities who, following anticontagionist doctrines, saw cholera spread by malign environments not sick people. Secondly, because the early stages of cholera were similar to, and easily confused with, those of a number of endemic diseases, such as diarrhoea and dysentery, instances of mistaken diagnosis were common. It should be remembered that the notion of disease specificity was still in the making, so a serious case of diarrhoea might transmute into Asiatic cholera. Disputes over diagnosis between members of the medical profession, or between them and other officials, were a further consequence of this situation, and one which often led members of the lay community to question or reject medical opinion. Acceptance that epidemic cholera was present usually followed the occurrence of a critical number of cases and deaths amongst local people, or where victims exhibited the unmistakable symptoms of 'true' or 'advanced' cholera. The problems over the designation of an

epidemic were evident in Yorkshire's four largest towns in 1848-49.

This part of the thesis details in turn the patterns of the epidemic in each town and the official and popular responses. The discussion of the four towns begins with Hull, the first and worst affected of the towns.

2.2. HULL

2.2.1. THE CHRONOLOGY OF THE EPIDEMIC.

As an East coast port which conducted most of its trade with the Baltic ports, it is hardly surprising that Hull was one of the first British towns to experience a 'cholera scare' during 1848. The first reported cases were imported from Hamburg, occurring amongst seamen at the end of September 1848.⁷ Despite official national policy being based on anticontagionism, the implementation of a limited form of quarantine by the port authorities was claimed to have successfully confined the disease to the stricken vessels. A further and more serious scare followed some three weeks later, when several suspicious cases were reported amongst the people of the town itself.⁸ However, after a short period of dispute and vacillation, local medical men announced to a relieved public that the cases had been of 'English' rather than 'Asiatic' cholera.⁹

There were no further reports or rumours that cholera was present until the summer of 1849. During the first three weeks of July an unspecified number of suspicious cases and nineteen alleged cholera deaths were reported. As had been the case the previous autumn there was doubt over whether or not the deaths were attributable to 'true' Asiatic cholera, not least because increased mortality from 'summer diarrhoea' and similar disorders was common at that time of year. That 'special causes' were assigned to several of the nineteen or

so 'cholera deaths' reported before 23 July merely added to the uncertainty.¹⁰ Indeed, when it transpired that one of the deceased had eaten 'an enormous quantity of peas', another 'much bad fruit' and that some of the others had visited infected localities prior to the onset of symptoms, it was asserted that there were no grounds for 'a wild panic'.

A further two cases, this time of 'true' cholera were diagnosed in the Myton district during the third week of July.¹¹ The disease quickly became established, such that these cases were later deemed to be the first cases of the epidemic proper.¹² Initially the disease spread slowly, claiming the lives of around fifty people during the first fortnight of August.¹³ Thereafter, the number of new cases and deaths began to increase with enormous speed as the epidemic spread into other parts of the town and entered its most explosive phase. Mortality levels reached a peak in September, with cholera and premonitory diarrhoea claiming the lives of almost 400 people in the first week of the month, an unprecedented 500 during the second week and well over 300 during the third.¹⁴ The epidemic became less severe towards the end of September and in October declined with remarkable speed. Indeed, during the week ending 20 October, the local Registrar had occasion to record just eight deaths, the last marked the end of the epidemic.

2.2.2. THE OFFICIAL RESPONSE, 1848.

News that cholera was affecting Moscow in 1847 caused a wave of concern amongst the medical profession and members of the general public in Hull. The experience of the first epidemic, when cholera spread unimpeded from Russia to Britain in little over a year, led to demands for the town's authorities to take immediate steps to avert another disaster.¹⁵ With the assistance of the local press, the medical profession began to agitate for improvements in the town's sanitary condition.

In November 1847, the recently formed Hull Medical Society (H.M.S.) appointed a sanitary committee which invited the Town Council to co-operate with it 'in providing against the reappearance of cholera'.¹⁶ The Town Council and two local Boards of Guardians were more concerned about the current fever epidemic (probably typhus) than the threat of cholera.¹⁷ Nevertheless, the Council's decision to create its own Sanitary Committee to put the Nuisance Removal Act (N.R.A.) into force, in the hope of quelling the fever epidemic, was seen as an encouraging sign. Indeed, it was observed that this, along with 'other indicators', demonstrated that there was a 'determination not to allow the cholera to re-appear among us without some preparations to mitigate its horrors'.¹⁸

Within a month of its formation, the Sanitary Committee of H.M.S. produced a comprehensive report. This contained the

familiar catalogue of nuisances and sanitary defects in each district and, as well as making numerous recommendations designed to bring about gradual but lasting improvements in the standard of the town's public health, identified a variety of 'local evils calling for immediate remedy in anticipation of cholera'.¹⁹ In addition to focussing public attention on the full spectrum of health hazards, the Report highlighted what was considered to be the major obstacle to improvement - the way in which the responsibility for sanitary arrangements was divided between separate agencies.²⁰

The problems of divided responsibility and over-lapping jurisdiction were evident in most large towns in the 1840s, but were particularly serious in Hull because of the number of agencies involved. Firstly, there was the Council, which was responsible for water supply and a limited range of cleansing and scavenging duties. Next came the two Boards of Guardians who had authority for nuisance removal and disease prevention. The provision and upkeep of drains and sewers was vested in two sets of Improvement Commissioners or, in those areas it owned, the Dock Company.²¹ The situation was further complicated because the removal of night-soil was left to private contractors. The net result was that work in crucial areas, such as scavenging, was done imperfectly, if at all.²² The Committee's view, that sanitary conditions could not be improved until all 'matters affecting the public health' were carried out by one and the same authority', was shared by members of the public and the local press.²³

Whilst news of cholera's approach in 1847 and the scourge of typhus led to an upsurge of interest in the public health question in Hull, the recommendations made by medical men and other sanitary reformers were ignored by the authorities. In 1848 pressure for sanitary improvements and contingency plans intensified as cholera again moved ever nearer .

Increasingly, the local authorities were admonished for their apparent indifference to sanitary precautions. At the beginning of the year, a local resident wrote of his belief that the authorities were acting as if 'they held their offices for no other purpose but to hinder every benevolent work'.²⁴ Despite repeated and vociferous demands for action, and criticism from the Health of Towns Association, the local authorities did little to improve sanitary conditions or to make plans for the threatened epidemic.²⁵ In July the threat was such that the Sanitary Committee of H.M.S. attempted once again to force the hand of the authorities. The Committee prepared a document outlining a number of anti-cholera measures and sent copies to members of the Council's Sanitary Committee, the Mayor and local newspapers.²⁶ Significantly, no mention was made of the need for major improvements or sweeping changes in the structure of the town's sanitary administration. Instead, the Committee urged a combination of temporary medical and sanitary measures. When the document was eventually discussed at a meeting of the Town Council, the majority view was that enough had already been done to prepare the town and that further measures would merely cause alarm amongst the general public.²⁷

By the beginning of September 1848 cholera had reached Hamburg, Rotterdam and the majority of Baltic ports, none more than three days' sailing away. The national government passed and adopted the new N.R.D.P.A., but the authorities in Hull did nothing. However, the official abandonment of quarantine was particularly welcomed, as the local economy was already suffering as a result of the Danish blockade which prevented access to the Baltic ports. The inevitable happened at the end of September when a German ship, 'The Pallas', arrived in the Humber with several cholera patients on board.²⁸

Ironically, the events which followed the ship's arrival actually deflected criticism from the Town Council and the Boards of Guardians. When it became known that the infected ship was moored on the Humber, the mood changed from one of tension to one of alarm.²⁹ Yet it was the actions of central government officials not the presence of an infected ship which caused controversy. The public watched in disbelief as 'The Pallas' was placed under quarantine by local customs officials acting at the command of the Privy Council in London. Under the terms of the quarantine, only medical men were permitted to visit the ship. All other communication between the ship and the shore was to be cut for a minimum of six days after the last death.³⁰ The Privy Council applied the same terms of quarantine to stricken ships arriving at other ports and introduced a shorter period of quarantine for all ships which had sailed from uninfected ports.³¹

Disbelief at this decision soon gave way to anger. A hard hitting editorial in the Hull Advertiser demanded that the name of the official who gave the order to place 'The Pallas' under quarantine should be made available to the public.³² The paper's anger at the decision was such that it urged the Mayor to sail out to the ship 'to haul down the yellow flag'. The Eastern Counties Herald took a similar stance, arguing that quarantine was an absurdity, which acted to the annoyance and injury of individuals and to the detriment of trade.³³ The Hull quarantine controversy quickly became the focus of national attention. The Times described the situation as intolerable because not only was freedom of movement being tampered with, but trade was being damaged, perishable goods lost and important business appointments broken.³⁴

At both local and national level, therefore, quarantine was attacked for being inconsistent with current theories of disease causation and the preventive strategies urged by the G.B.H. Why, asked the Hull Advertiser, had quarantine been imposed when local medical men and Dr Grainger of the G.B.H. had been to Hamburg and, after observing the epidemic and discussing it with German medical men, had declared that cholera was not contagious? ³⁵ Why, demanded the Times, should the Privy Council be allowed to undermine the G.B.H., local government and the vast majority of the medical profession with its 'ridiculous proceedings'?³⁶ In the event these questions were never answered. The Privy Council abandoned the quarantine on 18 October and, with reports of

cholera cases occurring amongst local people in Hull and its rapid diffusion in Scotland, the controversy faded as attention returned once again to internal sanitary policing and medical precautions. It seems that while medical opinion and the G.B.H. had moved to anticontagionism, the Privy Council had not.

For a few weeks the quarantine issue dominated the local news and diverted attention away from the campaign to force the town's authorities into implementing preventive measures. However, reports of cholera cases amongst the indigenous population in mid-October prompted further demands for action.³⁷ That medical opinion was divided over whether or not the cases alleged to have occurred in Hull itself were of 'English' or 'Asiatic' cholera was of no consequence to the Advertiser; what mattered, it argued, was that repeated calls for sanitary precautions had been ignored by the local authorities. In self-righteous tones the paper declared that now cholera was present in the town,

'The chidden and rebuked alarmists of the last ten months, whose voices conveyed ... an unwelcome message to the great bulk of the middle classes, now stand forth as prophets in the very eyes of the men who denounced them'.³⁸

On a more conciliatory note it added that now cholera had been diagnosed 'the authorities of Hull will do all in their powers to save the lives of the inhabitants'.

There was no shortage of advice regarding what course of action should be taken. The Sanitary Committee of H.M.S. re-emphasized the need for the formation of a single sanitary authority with jurisdiction over the whole borough, which could put cleansing and nuisance removal operations into immediate effect and prepare a scheme for medical care and treatment.³⁹ The G.B.H.'s Medical Inspectors, Drs Sutherland and Grainger, made similar recommendations when they visited Hull in October. They conducted an enquiry into the cases reported to have occurred amongst local people, pointing out that the various provisions of the recently invoked the N.R.D.P.A. could be implemented most effectively if the authorities - the Council and two Boards of Guardians - formed a joint sanitary committee or, better still a Local Board of Health (L.B.H.).⁴⁰ In case the local authorities chose to ignore this advice, the local newspapers were quick to point out that, under the terms of the Act, the existing Poor Law authorities had the necessary powers to take whatever steps were necessary for the repression of nuisances and the provision of medical facilities.⁴¹ However, with the exception of limited nuisance removal, neither the Council nor the Guardians took further action.

The authorities' failure to respond was a matter of deep concern to Hull's sanitary lobby and, most notably, members of the Medical Society. The gravity of the situation was such that a number of councillors and rate-payers decided not to wait for the local authorities to act. At the beginning of October, certain members of the Council voted to support a

motion requesting the G.B.H. to apply the Public Health Act (P.H.A.).⁴² Despite considerable hostility from a number of councillors, an acrimonious Council meeting ended in victory for the reformers. A petition requiring the support of 10% of the town's rate-payers was prepared for circulation. The Hull Advertiser, which had played a major role in bringing sanitary problems to the public's attention, regarded this as excellent news. It urged local rate-payers who valued 'their own lives and the lives of the poor' to sign the petition without delay.⁴³ In the event, the authorities' failure to respond positively to public opinion made a major contribution to putting the reform process into motion.⁴⁴

2.2.3. THE OFFICIAL RESPONSE, 1849

Although cholera's failure to establish itself in Hull in 1848 and the decline of the epidemic nationally in the winter of 1848-49 took the edge off the sanitary question, there were further calls from local medical men, members of the public and the local press for the authorities to take advantage of the winter respite to initiate cleansing and general sanitary measures.⁴⁵ During the spring and early summer of 1849, the news that cholera was moving overland towards Hull sparked off renewed complaints about the state of the town, the authorities seeming reluctance to take remedial steps and the lack of medical planning. As indicated earlier, there was a spate of scares during the early summer, but an epidemic was not designated until mid-July when cases were confirmed in Myton.⁴⁶ Before this it was reported that, with the exception

of a 'laborious and tedious process for abating a few nuisances, no steps of a really preventive nature had been taken'.⁴⁷ Indeed, the Sculcoates Board of Guardians, who were generally considered to be more progressive than their counterparts in the Holy Trinity and St. Mary's (Hull) Union district, had spent only £15 on nuisance removal operations in the first six months of the year.⁴⁸

Predictably, confirmation that cholera was present in July and the knowledge that the authorities had done little to alleviate the danger, led to demands for immediate action. Twenty three local medical men wrote to the Mayor and urged sanitary and medical measures similar to those suggested by H.M.S. and the G.B.H.⁴⁹ Dr Sutherland of the G.B.H. again visited the town to carry out a sanitary survey and advise the local authorities on the best mode of prevention.⁵⁰ At a meeting with the Sanitary Committee of Hull Board of Guardians, Sutherland urged comprehensive sanitary cleansing operations and the implementation of a system of medical care. The latter included: (i) the division of the Union into separate medical districts; (ii) the provision of dispensaries, a diarrhoea hospital and a House of Refuge; (iii) the appointment of house-to-house visitors to detect cases of premonitory diarrhoea, to instruct patients to seek medical treatment and to provide advice on matters of hygiene and diet; (iv) the removal of cholera patients' families to the House of Refuge; and (v) the thorough cleansing and limewashing of patient's houses.⁵¹

Sutherland's directions were by no means new. Indeed, similar plans had been publicised over the previous nine months. However, as local sanitary reformers had predicted, Hull's complex administrative arrangements proved to be a major obstacle. Since the N.R.D.P.A. had been put into force in October 1848, both Boards of Guardians had been informed of their responsibilities on several occasions.⁵² However, at a meeting of the Hull Guardians it transpired that just one Guardian realised that they, rather than the Council or the two sets of Improvement Commissioners, were responsible under the Act.⁵³

After Sutherland (and the local press) had clarified responsibilities and explained the need for immediate action, there were signs that both Boards of Guardians were at last prepared to act. However, once the epidemic had arrived sanitary measures had to be augmented by curative measures. The Hull Guardians acquired premises for use as dispensaries, employed druggists, appointed several medical men to provide care for the sick, and proposed that nuisance removal should be stepped up.⁵⁴ The Sculcoates Guardians were also reported to have adopted 'very energetic measures' for the removal of nuisances, cleansing the houses of the poor and the provision of medical relief.⁵⁵ In July, the Advertiser was still quite optimistic that, 'If [the authorities] faithfully execute the trust reposed in them, we shall have no more Cholera'.⁵⁶

However, as cholera began to spread across the town, it became apparent that action had been too little as well as too

late. Mr Chatam, Clerk of Sculcoates Union, conducted a sanitary inspection of the town at the beginning of August and discovered that there was still 'a frightful neglect of duty' on the part of both Boards of Guardians.⁵⁷ Throughout August belated efforts were made to cleanse the town. In Sculcoates, the Guardians and Improvement Commissioners claimed to have redoubled their efforts to remove nuisances, cleanse houses, yards, drains and streets and to prosecute offenders for infringing the N.R.D.P.A. However, hastily conceived measures did not always have the desired effect. For example, in an attempt to provide a quick solution to the long-standing problem arising from the storage of night-soil in residential areas, the Sculcoates Guardians hired a plot of land some two miles outside the town and announced that they would prosecute any contractor who failed to use it.⁵⁸ The plan quickly backfired as both householders and contractors refused to use the tip because of its distance from the town. Worse still, several contractors stopped collecting night-soil altogether, fearing that storing manure in their own yards would result in prosecution.⁵⁹

During the first fortnight of September the epidemic intensified dramatically. The average number of deaths each day from cholera and premonitory diarrhoea reached 57 in the week ending 6 September and rose to 72 per day the following week.⁶⁰ Cholera was present across the whole town and claimed middle as well working class victims. With this frightening upturn in mortality the preventive measures implemented by the authorities yet again came under scrutiny. The Herald

described the existing means of combating the epidemic as 'puny', whilst the Packet continued to condemn the 'shameful neglect' of the town's authorities.⁶¹ The Advertiser took a similar stance, arguing that had proper steps been taken and arrangements made earlier in the year, the inhabitants of Hull would not be suffering so terribly.⁶² The situation was so worrying that several anxious residents wrote to the G.B.H. complaining that the Guardians had utterly neglected its regulations and requesting that Sutherland be sent back to Hull.⁶³ The Board complied and Sutherland returned on 13 September to find 'the aspect of things even worse than had been represented'.⁶⁴

Sutherland discovered that the Hull Guardians had completely disregarded the instructions he had given them in July. Thus, at the height of the epidemic, little had been accomplished in the area of nuisance removal, no cleansing teams had been organised, no houses had been limewashed, house-to-house visitors had not been recruited, insufficient medical men and medical staff had been appointed, a house of refuge had not been found, no accurate records of the number and location of cases had been kept, and, perhaps worst of all given the emphasis on early treatment of premonitory symptoms, the three dispensaries opened after Sutherland's previous visit had all been closed.⁶⁵ The situation in the Sculcoates area was said to be marginally better. Cleansing and nuisance removal operations had been put into effect and the Guardians, aware of 'their previous woeful neglect', were at least in a position to act upon any further instructions Sutherland might

issue.⁶⁶ Having assessed the situation, Sutherland held urgent talks with both sets of Guardians. At separate meetings he ordered both Boards to engage the required staff, procure appropriate buildings and make the arrangements for an effective medical relief system. Within a matter of days both Boards had divided their areas into separate medical districts, set up systems of house-to-house visitation, opened houses of refuge, diarrhoea hospitals and twenty-four hour dispensaries, appointed additional medical men, nurses and cleansing operatives, stepped up cleansing and nuisance removal operations, and distributed leaflets and posters throughout the town informing the public of how the preventive system operated.⁶⁷ The local newspapers were unanimous in their praise for these 'excellent measures', and reassured the public by pointing out that Sutherland was not the kind of man to be 'humbled twice'.⁶⁸

The strategy of containing the epidemic went ahead on two fronts. An attempt was made to prevent the disease breaking out by removing the various nuisances from which it was thought to emanate, or where appropriate, through the cleansing, limewashing and disinfection of previously infected premises. The system of medical prevention turned out to be more significant. This was based on visitors calling at every house in a given district to establish whether occupants had diarrhoea or other premonitory symptoms. When diarrhoea was discovered patients with mild symptoms were sent to the dispensaries where they were provided with free medicines. People with more severe symptoms were visited by a medical man

and, if necessary, taken to the diarrhoea hospital. When visitors discovered cases of 'true' cholera, the patient was treated at home, but other residents were sent to the house of refuge or if they had premonitory symptoms, the diarrhoea hospital.

By 28 September the system was in operation throughout the entire town and within days the number of new cases began to decrease markedly. Sutherland interpreted this as conclusive evidence of the efficacy of the G.B.H.'s strategy.⁶⁹ The Hull newspapers agreed. At the beginning of October, the Advertiser attributed the diminishing number of new cases and the declining average daily mortality to the zeal with which medical men had carried out the General Board's regulations.⁷⁰

The G.B.H. blamed the local authorities' failure to respond to the threat of cholera on official incompetence and the Guardians philosophical acceptance of the view that cholera was a form Divine intervention beyond human aid. Local reformers believed that behind the various excuses lay the complacency and parsimony of a local elite whose main concerns were keeping rates down to an absolute minimum and retaining their hold over the institutions of local government. The failure to respond to the threat or arrival of cholera (or to initiate sanitary improvements) was symptomatic of the fact that political power in Hull lay firmly in the hands of a tight knit oligarchy which represented the interests of the town's capitalist class. The

attitudes and behaviour of both sets of Guardians, the Council, individual Guardians and Councillors in a private capacity, magistrates, and even the town's M.P. suggest that, when its economic interests were jeopardized, the elite class was ready to close ranks to block reforms or improvements which might prove costly. There is another strand to this argument. The protection of elite interests was dependent on their control of the various branches of local government which was itself perpetuated by a high level of cross membership. Retaining this control was seen as paramount. Thus, the local authorities had a strong interest in keeping parochial and municipal spending to a minimum since to do otherwise might possibly lead to a rate-payers revolt. The determination not to lose control of local government led to a particularly strong suspicion of central authority. This provides a partial explanation of the authorities refusal to act upon the directives of the G.B.H., yet is illustrated most graphically by the fact that in 1849, the Hull Guardians were the only such body not to have submitted to the central control of the Poor Law Board. The Advertiser remarked that this was the kind of attitude that excluded Hull, 'from the light of social progress'.⁷¹

2.2.4. THE MIDDLE CLASS

Analysis of cholera's first visit to Britain has shown that people's reactions to the disease and their behaviour throughout the epidemic were, to a great extent, governed by the resources, customs and conventions associated with their

class position. Amongst the options open to members of the middle class was the chance to become involved in the fight to prevent or curb the epidemic. This could be achieved officially, through membership of, or work for, a L.B.H., or unofficially through any one of several charitable works or gestures. Because the poor lacked the resources, financial and practical, and were far more likely to be affected by the disease, the task of devising and implementing assistance was a middle class prerogative.

Broadly speaking, the situation was the same during the second epidemic. The 'official response' was essentially a middle class response, orchestrated by government agencies, the institutions and officers of local government and, of course, members of the medical profession. However, the situation differed in that under the terms of the N.R.D.P.A.; preventive measures at the local level were delegated to existing local government agencies, usually Boards of Guardians, rather than to local boards of health established specifically to administer remedial and preventive initiatives and policies. If the local authorities so desired, this could lead to a situation where those who wanted to contribute to the preventive effort were forced to work outside the official machinery.

In Hull, perhaps an extreme example of this kind, official measures were so limited that there was little scope for involvement through existing agencies. But why were the local elite and officials so indolent, especially given the

town's vulnerability as a low-lying port? In the initial stages of the epidemic the Hull Guardians claimed their failure to act upon the directives issued by the G.B.H. had been due to a misunderstanding of how the N.R.D.P.A. worked. Towards the end of the epidemic they propounded the view that cholera was 'a divine visitation ... utterly beyond human aid'.⁷² Neither claim was plausible. Shortly after the epidemic began, both of Hull's Boards of Guardians had their legal obligations explained to them and still failed to act. Furthermore, although there had been a widespread belief in divine retribution during the first epidemic, by 1849 it was rarely cited as a theory of disease causation.⁷³ On closer inspection it becomes clear that the desire to preserve low rates coupled with an utter disregard for the plight of the poor was the most pressing consideration for the local authorities. This was illustrated by official attitudes to implementation of the N.R.D.P.A., the cost of which would have been borne by rate-payers.

At a meeting of the Hull Guardians held at the beginning of September 1849 for the purpose of setting the poor rate for the ensuing six months, the Governor of the Hull Guardians expressed the view that the N.R.D.P.A. was an 'expensive piece of machinery' and 'an umbrous load'.⁷⁴ Implementing the Act, he explained, would cost 'a serious amount of money, and to carry out the extreme of the law would, perhaps, revolutionise Hull'. Predictably, the Governor's remarks caused outrage amongst the sanitary lobby. He and his colleagues were rebuked for their 'cool effrontery' in comparing 'the

inconveniences ... resulting from the N.R.D.P.A. with the calamitous results of cholera'.⁷⁵ That financial considerations were given priority over preventing further loss of life led an editor of the Advertiser, also one of the town's most committed sanitary reformers, to ask 'are we such worshippers of Mammon that an expenditure of £1,000 or £5,000, in the removal of nuisances is to be deemed as great a tragedy as the loss of hundreds of our fellow creatures?'⁷⁶ In view of the fact that the Guardians viewed the N.R.D.P.A. as 'a curse as bitter as cholera', it seems that in their case, the answer to this question was an unequivocal 'yes'.

Criticism of the Guardians attitude to nuisance removal was not confined to the issue of morality. It was argued that the whole basis of their reasoning was fundamentally flawed. Throughout the course of the epidemic and indeed, well before, local medical men and all the town's newspapers had repeatedly pointed out that money spent on preserving the public health would reduce both mortality and pauperism and would therefore actually lessen the burden on local rate-payers.⁷⁷ That the Guardians failed to take cognizance of this widely voiced Chadwickian argument did not surprise the Advertiser which attacked what it considered to be the 'penny-wise pound foolish economy that prevails in the Hull Workhouse' and which had, it added, prevented improvements in the management of the poor for several years.⁷⁸

A reluctance to increase the burden of local poor rates was not the only reason why the Hull Guardians had

reservations about implementing the N.R.D.P.A. During the course of the epidemic it transpired that they were actually amongst the worst creators of nuisances. On at least two occasions the Sanitary Committee of the Hull Guardians was taken to court by their counterparts from the Sculcoates Union and convicted for creating nuisances.⁷⁹ The private affairs of individual members of the Sanitary Committee gave rise to even greater concern. Members of both the Sculcoates and Hull Boards were included amongst the town's most notorious landlords, a class of people described as 'the rich proprietors of nuisances' and singled out for bitter criticism by the town's press.⁸⁰ A double standard operated as one of Hull's biggest property owners was allowed a week to remove nuisances, whereas the magistrates made 'the poor do it immediately'.⁸¹ Not surprisingly, there were intimations of a conspiracy on the part of the Hull Guardians and the town's magistrates to impede the successful operation of the N.R.D.P.A. The Herald certainly detected a degree of 'indecision and trifling in the conduct of both magistrates and Poor Law Guardians' which, it added, 'cannot be too strongly reprobated'.⁸² Two other groups who came in for criticism in the local press were the builders and owners of working class housing. Despite constant prompting, few if any landlords took steps to improve the conditions in and around their properties. Instead the responsibility for cleansing, nuisance removal and other sanitary measures was left to tenants, whom it was recognised did not have the resources to effect worthwhile improvements. Landlords and builders were denounced as 'Cholera Manufacturers' and members of the 'Anti-

Health League', who refused 'to part with a few pounds ... to make their property other than a curse to the neighbourhood'.⁸³ Such negligence, it was argued, stood as testimony to their 'gross disregard for anything other than obtaining exorbitant percentages on their investments'.⁸⁴

During the first cholera epidemic, fear of contracting cholera or of serious social unrest were important factors in determining middle class responses. In so far as fear played a part in motivating Hull's Guardians and landlords in 1848-49, it seems to have been only a fear of the cost of a system of prevention. The behaviour of another section of the town's middle class indicates that they perceived the threat of cholera differently. Although the experience of the first epidemic and indeed, the first two months of the 1849 epidemic, demonstrated that the vast majority of cholera victims were working class and the middle class was relatively safe, this does not appear to have reassured those who responded to the continuing spread of the epidemic by leaving the town. By the end of August, many 'respectable families' were reported to have left.⁸⁵ Two weeks later the middle class exodus, like the epidemic, was reported to have continued unabated.⁸⁶

That flight was an option only open to the middle class did not go unnoticed by the local press. Neither did the fact that a number of local dignitaries and officials were amongst those who chose to take this option. The knowledge that the majority of Town Councillors fled at the height of the

epidemic provoked an angry reaction. To the Advertiser, the Councillor's decision to 'abandon the town to its fate' after doing absolutely nothing to prepare the town for the epidemic, was yet another example of official complacency and was 'astonished that the Town Council ... manifested such an utter indifference to the lives of the people'.⁸⁷

Whilst the local authorities had to be coerced into taking sanitary measures and providing medical aid and some of the town's most respectable families fled, one section of the middle class did act. This group comprised journalists, medical men, churchmen and a number of individuals, who did whatever they could to campaign on behalf of the poor. Broadly speaking this group constituted the town's sanitary lobby, but although they were united in calling for sanitary improvements, they did not act as a single group or unified body. This was mainly because they did not have access to the resources or agencies to effect change, so each was confined to act within their own sphere.

Throughout the period 1847-49 the local newspapers did their utmost to spur the authorities into action. The Advertiser in particular was a source of constant propaganda and a persistent thorn in the side of the authorities.⁸⁸ In addition to making the cases for preventive measures and lasting sanitary improvements, the newspapers provided the public with a variety of much needed information. In the absence of official sources of information, such as handbills and posters, the newspapers advised the public on cleansing,

personal hygiene, diet, and other hygienic measures. They also supplied information on where and when medical aid could be obtained, recommended various medicines and treatments and kept the public up to date with the latest developments in medical thinking on disease causation and treatment. Another important role the newspapers took on was that of quashing rumours and allaying alarm. During the first epidemic rumours spread alarm amongst the public. As fear was considered to predispose the individual to cholera, the newspapers sought to provide accurate and up to date information on the epidemic's progress. Much to the annoyance of the local authorities, all the town's newspapers published such returns of morbidity and mortality as they could obtain.

Obviously it was much easier for the newspapers to chastise and bully the local authorities and to provide the public with information than for any individual or group to finance and organise the type of sanitary cleansing operations required. Nevertheless, attempts were made by a number of individuals to assist the poor in this task. One of the town's leading sanitary reformers offered to organise the removal of the worst accumulations of night-soil if the authorities would provide him with men and carts.⁸⁹ Needless to say, the authorities chose not to accept. Without the authorities' cooperation it was impossible for the good intentions of middle class sanitary reformers to translate into a comprehensive and worthwhile cleansing campaign. As a result, middle class assistance in this area took the form of gestures designed to help the poor to help themselves. For

example, a number of wealthier citizens paid for supplies of chloride of lime which was distributed free of charge to working class people whilst others provided the chemicals needed to fumigate houses.⁹⁰

2.2.5 THE WORKING CLASS

The cholera experience was traumatic for Hull's working class. The disease left few families intact; many parents lost children, and a large number of children were orphaned. Suffering, grief and profound distress followed the disease. Those individuals and families stricken were often in desperate need of practical assistance, particularly nursing, and emotional support. With the virtual absence of an official system of medical care until mid-September, both these tasks fell to religious groups. Throughout the epidemic churchmen and lay people of various denominations worked tirelessly amongst the poor, providing both spiritual comfort for the dying and bereaved, and where possible, help with nursing the sick. Visitors from the Methodist Town Mission helped families to nurse their sick, attending up to ten serious cholera cases a day.⁹¹ A more unusual but equally benevolent course of action was taken by the Vicar of Holy Trinity who distributed free port to the poor in his parish; port wine, like certain spirits, was thought to afford a degree of protection against cholera.⁹²

In addition to providing care and spiritual solace for the poor, sick, dying and bereaved, Churches offered comfort

and reassurance for the entire community.⁹³ Through Days of Humiliation, fasts and special religious services, massive and often inter-denominational congregations acknowledged the 'hand of God in the present awful visitation', repented their sins and prayed for 'the removal of the existing calamity'.⁹⁴ That these events were so well attended by both regular church goers and people who had never entered a church before, suggests that they were a source of consolation and hope. Donations were made to the collections at these services which were used for material relief amongst the poor and bereaved. In addition to money, donations of food and blankets were made.⁹⁵

Until Sutherland compelled both Boards of Guardians to implement the various provisions of the N.R.D.P.A. in mid-September, the poor were almost completely without the protection of 'official' medical care. Local medical men were forced to acknowledge that, prior to Sutherland's September visit, many of the poor had died 'unseen' and few cases of diarrhoea had been attended by medical men.⁹⁶ Moreover, according to one source, at the height of the epidemic, there was not one place 'where a poor creature suffering from a bowel complaint ... can obtain a dose of medicine without paying for it'.⁹⁷ As well as endangering the poor, the authorities' refused to employ sufficient medical men, chemists, nursing staff and visitors. Although there were allegations of medical men refusing treatment to the poor or charging exorbitant rates for their services, the bulk of

evidence suggests that many medical men worked heroically throughout the epidemic.⁹⁸

Predictions that cholera would claim the vast majority of its victims from the ranks of the poor were borne out. The analysis of Dr Cooper, Medical Superintendent to Sculcoates Guardians, revealed a high class specific mortality, with over 90% of its victims belonging to the 'Labouring Classes'.⁹⁹ Only in Merthyr Tidfyl in South Wales did any other working class community suffer as much. Moreover, in the opinion of Sutherland, no other large working class community, received as little protection or assistance from the local authorities.¹⁰⁰

Given that official medical and sanitary measures had angered the working class in 1831-32, it is interesting to look at the reactions of communities eighteen years on. In 1848-49, it is clear that the working class would have welcomed and co-operated with official preventive measures had they been adopted earlier. In most towns visited by cholera, the local authorities issued a series of handbills and posters giving details of the official preventive measures and advising the public on the steps they could take to reduce the risk of contracting the disease. In Hull, the only 'authoritative' advice the public received until mid-September came from the newspapers and possibly medical men. Several aspects of working class behaviour suggest that much of the advice issued by the papers was heeded.

Medical opinion held that an unsuitable diet was likely to 'predispose' the individual to cholera. Warnings about the need to avoid certain foodstuffs and drinks - fruit, vegetables, bad meat, offal and alcoholic beverages other than spirits - were published on numerous occasions.¹⁰¹ In 1849 the level of unemployment and distress in Hull - a canvass of the town in July 1849 revealed that some 12,000 people were without sustenance - was such that for many people the act of obtaining any food at all, let alone a special diet, was already difficult enough.¹⁰² Despite this, it seems that people did make a conscious effort to modify their diets. Consumption of fruit and vegetables was reported to have fallen drastically during the epidemic.¹⁰³ There is reason to doubt that working class drinking habits changed as funerals were said to be accompanied by much drunkenness.¹⁰⁴ However other evidence points to a decline in beer drinking and an increase in the consumption of spirits, which were considered by the medical profession to be an effective preventive.¹⁰⁵ The shift in drinking habits was so dramatic that local innkeepers reported that 'only one pint of beer or porter is called where one hundred used to be ... whilst the demand for ... brandy increases daily'.¹⁰⁶ Warnings about the need for bodily and domestic hygiene were widely diffused.¹⁰⁷ For working class people such instructions were often impossible to follow. In many districts the lack of running water made personal cleanliness difficult. Nevertheless, bodily hygiene does appear to have been important to many of the poorer citizens. In 1849 many operatives and artisans were reported to be in the habit of bathing at the New Waterworks, despite

the fact that the baths were a considerable distance from the town.¹⁰⁸

A number of factors combined to thwart working class efforts to achieve domestic cleanliness. Shortly before the epidemic began, Smith of Deanston noted that although the population were 'inclined to cleanly habits ... the want of an efficient house and street sewerage, with a convenient supply of water', meant that they could not 'have that thorough cleanliness which is conducive to health'.¹⁰⁹ Cooper proffered a similar view, commenting that under current sanitary arrangements the urban environment was such that it was impossible for people in most districts to keep their 'houses free from the filth that surrounds them'.¹¹⁰ Cleanliness and sanitation in and around working class homes was also jeopardized by the reluctance of tenants to make complaints. The Clerk to the Sculcoates Board of Guardians informed Smith of Deanston that many nuisances were not removed because people were 'often influenced by fear of their landlords from coming forward and giving the necessary information, and in some instances [said they did] not wish the nuisance removed'.¹¹¹

In spite of these difficulties, and the fact that the working class did not have access to the necessary tools and resources to undertake major cleansing projects, attempts were made to remove nuisances from homes, yards and, on occasions, entire neighbourhoods. Limited forms of self-help in sanitary matters became a notable feature of the popular response. In

the Sculcoates district gangs of local men removed nuisances, swilled the streets and disinfected drains and walkways with a solution of bleach and vitriol.¹¹² Elsewhere, brooms, chloride of lime and other chemicals donated by the middle class were gratefully received and, one must presume, used.¹¹³ Several letters published in the press indicate that there were tangible signs of working class action. One correspondent applauded working class endeavours, but feared that once the epidemic had subsided, the poor's extraordinary interest and participation in domestic hygiene would decline.¹¹⁴

These self-help initiatives demonstrate that working class people shared the view that insanitary conditions were a threat to health. A more militant response was the belief that the authorities' failure to undertake cleansing and nuisance removal operations on a worthwhile scale was an abdication of responsibility. This was illustrated by an incident which took place in Sculcoates. In an instance of direct action, the people of New George Street, disillusioned and angry about the Guardians' failure to remove nuisances, took it upon themselves to clean up their neighbourhood and to deposit the resulting accumulations of rubbish on the doorsteps of local Guardians.¹¹⁵

Modification of diet and sanitary vigilance were just two aspects of the popular response to the epidemic which indicate that the poor were prepared to comply with official advice and would have supported a more positive 'official' preventive

strategy. Their willingness to take up medical aid and treatment once it became available through official channels provides further support. When finally compelled to provide medical facilities and free treatment, the poor were the main recipients. However, Dr Cooper pointed out that initially the poor had to be encouraged to apply for treatment by house-to-house visitors. He attributed this to carelessness and apathy, plus ignorance of the fact that even the mildest bowel complaint could soon develop into Asiatic cholera.¹¹⁶ In fairness to the 'ignorant', it should be pointed out that the provision of free medical aid represented such a dramatic turnabout in official policy that it was understandably met with suspicion. Moreover, there was a general reluctance amongst the poor to seek aid from the detested Poor Law authorities, especially for mild bowel complaints, a condition which many of them suffered more or less permanently. Nevertheless, once the preventive machinery was in operation approximately 5,000 applications were made for free medicine, the equivalent of one in ten of the population.¹¹⁷ Cooper did find certain aspects of the poor's behaviour commendable. He praised their 'readiness to give information', which proved to be extremely valuable in directing the cleansing campaign. The way in which they received visitors and acted upon their advice suggests that although the visitors' role was essentially 'intrusive' it was not resented by the poor. This represented a significant change from the situation in 1831-32, when visitors and other 'officials' received a distinctly hostile reception in many working class communities.

It would be misleading to give the impression that the actions of working people were guided exclusively by the advice and instructions they received from newspapers, medical men, and other 'official' or middle class sources. Official 'solutions' were only adopted if they were consistent with working class understanding of particular problems. Shortly after cholera appeared in Hull, a local newspaper warned the public that discredited traditional practices such as 'the old nostrum of tar barrel burning' should not be revived.¹¹⁸ This advice was ignored. When it became apparent that the epidemic was spreading unchecked, tar burning became an integral part of the a working class self-help initiative. One eye witness claimed that so many barrels were lit at night that 'there was a ghastly glare all around' and that 'the night was as day'.¹¹⁹ Having been constantly told that cholera was spread through the atmosphere and that all smells were disease, the idea of obliterating smells and miasmas with acrid smoke was a rational way of trying to disinfect the atmosphere and reduce epidemic influences.¹²⁰

It seems likely that calls for the public not to resort to 'quack remedies' were also ignored.¹²¹ For much of the epidemic period medical relief was difficult to obtain. This was especially so for the 'deserving poor' who could not afford to pay orthodox medical men, or secure the services of those overworked practitioners who provided 'unofficial' treatment free of charge, or because they were in receipt of wages, were ineligible for relief or treatment at either of the town's workhouses.¹²² Moreover, bitter public squabbles

between local medical men over the efficacy of particular treatments, were hardly calculated to inspire public confidence in orthodox medicine.¹²³ As several of Hull's leading medical men complained, the public, whether through necessity or choice, sought cures and treatments from alternative practitioners including, medical botanists, chemists and druggists and patent medicine vendors.

Although the miasmatic theory dominated official thinking on disease causation in 1849, there was still widespread support for contagionism amongst medical and lay communities. Dr Sandwith, a respected figure in the local medical community, remarked that the number of deaths occurring amongst people who came into contact with the sick convinced him that 'cholera is infectious'.¹²⁴ Various aspects of working class behaviour suggest that a significant numbers of local people drew similar conclusions.¹²⁵ At the beginning of the epidemic, Dr Ayre, Chairman of the Council's Sanitary Committee, estimated that if the outbreak became severe, up to two thousand nurses would be required, but thought that the public's fear of coming into contact with cholera patients would be a major obstacle to recruitment.¹²⁶ Further evidence of a working class belief in contagionism came to light during the later stages of the epidemic when the Guardians decided to open two cholera hospitals and a house of refuge. One of these was in a densely populated street and a mob of over two hundred householders gathered to prevent 'patients being conveyed there.'¹²⁷ This assertive behaviour had the desired effect; in a rare concession to popular

feeling, the Guardians abandoned their plans and instead used the Vagrant Office. The fear of contagion was reinforced by the news that a number of medical men and nurses had contracted cholera and contributed to widespread reluctance to enter either cholera hospitals or the house of refuge.¹²⁸

Other forms of conduct also point to a popular belief that cholera was contagious. As the epidemic spread, people displayed a clear reluctance to leave their homes. By September, Hull's normally teeming streets were reported to be virtually deserted and what activity there was revolved in the main around funeral processions.¹²⁹ Shops and places of entertainment suffered serious loss of trade; it was observed that the only retailers who flourished during the epidemic were drapers who sold mourning apparel.¹³⁰ Fear of contagion also discouraged people from visiting Hull. Such was the fear of entering the 'woe-smitten town' that traders from outlying villages ceased to attend the market and the only people arriving at the railway station were mourners.¹³¹ The only time people demonstrated a willingness to congregate was when they attended special religious services.

2.2.6. LOCAL SANITARY ADMINISTRATION AFTER 1849

Given the severe nature of the epidemic it was perhaps inevitable that subsequently there would be intense pressure for changes in Hull's sanitary administration. As indicated earlier, the structure of local government was identified as a major obstacle to both lasting improvements and to the

implementation of temporary anti-cholera measures well before the epidemic began.¹³² The G.B.H.'s report on the town, not published until 1850, reached the same conclusion as local reformers, medical men and even members of the existing sanitary agencies.¹³³ Smith of Deanston recommended that the powers of the P.H.A. should be applied to Hull, with the Corporation acting as a L.B.H. and having jurisdiction over the entire Borough.¹³⁴ Before the G.B.H. could designate the Corporation a L.B.H., interested parties were given the opportunity to comment on the proposal. The 'improvers', fearing that objections would be raised by the so called 'muck interest', used the recent epidemic to push for immediate reform.¹³⁵ When the municipal elections came round in the late autumn, the electorate was warned of the dangers of voting for 'economist' candidates who were, it claimed, unsuitably qualified for membership of a L.B.H.¹³⁶ In a blunt editorial, the Advertiser reminded its readers that local medical men and 'the highest medical authority in England' had stated that the level of cholera mortality in 1849 was directly attributable to the absence of proper sanitary regulations.¹³⁷ This, it claimed, was the fault of 'the local jurisdictions by which the town is afflicted'. It continued by pointing out that although the cost of improvements would have to be met by local rate-payers, the financial implications of epidemics like the recent cholera visitation were serious for all classes.

Legal procedures were finally completed in August 1852 when, following Royal Assent, the Town Council met for the

first time as the L.B.H.¹³⁸ Immediately steps were taken to reorganise the town's sanitary administration, a number of Committees were elected and officers employed for a variety of sanitary functions formerly left to the Surveyors of Highways and Improvement Commissioners.¹³⁹ The memory of 1849 was also evoked by improvers in an attempt to ensure that when the Board came into existence it would be controlled by sympathetic Councillors. In that the formation of the L.B.H. went a considerable way to solving the problems posed by the complex structure of local government in the town, a case can be made for cholera being a friend to sanitary reformers in Hull. However, and as the Hull Advertiser was well aware, administrative reform did not guarantee that sanitary improvements would be made. Whether or not new sanitary agencies in Hull and elsewhere would use the powers available to them under the P.H.A. (and local acts and by-laws) was an entirely different question.

2.3. LEEDS

2.3.1. CHRONOLOGY OF THE EPIDEMIC

Although cholera's presence in Hamburg in the summer of 1848 and its arrival in Britain in September were widely reported by the press in Leeds, no cases of 'Asiatic' cholera came to light in the town that year.¹⁴⁰ The renewed threat in the summer of 1849 coincided with the beginning of the annual diarrhoea season, thus exacerbating the problems faced by medical men. Alarm grew in mid-June when a local newspaper reported that cases had occurred amongst Irish families in the Bank district.¹⁴¹ At the end of the month, however, it was announced that the disease was no longer present, though local medical men said severe diarrhoea was affecting several districts. In mid-July the situation changed, with newspapers reporting that a number of new cases in the Bank.¹⁴² Further cases occurred in the last week of July, and deaths in Hunslet at the beginning of August signalled the start of the epidemic proper.¹⁴³ By 18 August new cases were being reported 'all over the Borough', though the number of fatalities was still relatively low.¹⁴⁴ This was the calm before the storm.

Using the G.B.H.'s daily returns, which were published in the Times between 19 August and 15 September, it is possible to follow the epidemic's progress in the Leeds Registration District with relative ease.¹⁴⁵ Up to 25 August, a total of 80 lives had been claimed. Over the next three weeks the epidemic intensified alarmingly: 75 deaths were reported in

the week ending 1 September, 188 in the week ending 8 September, and 256 during the following week. In just three weeks the death toll had increased sixfold and stood at over 600. Although there were occasional breaks in the official returns after 15 September, the epidemic continued to rage well into October. Weekly mortality did not fall below 140 until mid-October. As had been the case in Hull, once the epidemic began to wane, it did so abruptly. A further 29 fatalities were reported between 13 and 20 October; after this date only a handful of deaths were reported and by the end of the month cholera had virtually disappeared from the town.

2.3.2. THE OFFICIAL RESPONSE IN 1848

Under the terms of the N.R.D.P.A. the task of preparing the town for the impending epidemic fell to the Leeds Guardians. Mindful of the potential difficulties arising from a system of local government in which the responsibility for public health was divided between different agencies, the Guardians immediately approached the Town Council to request their co-operation in forming a joint Sanitary Committee to administer the various provisions of the Act.¹⁴⁶

The move to establish formal co-operation between the Guardians and Council revived a precedent set during the successful campaign against fever in 1847, when the Town Council's Scavenging and Nuisance Committee assisted the Guardians.¹⁴⁷ Working together, the two agencies had embarked upon an energetic campaign in which almost one thousand houses

were disinfected and whitewashed, streets and courtyards cleansed and assorted nuisances removed. Because the vast majority of fever patients were poor, medical arrangements had been left to the Guardians.¹⁴⁸ Medical relief and treatment had been provided by a team of specially recruited medical men, nurses and auxiliaries in the House of Recovery. As the fever epidemic intensified and demand for treatment increased, fever sheds had to be erected, further hospital accommodation rented and additional staff employed.¹⁴⁹ Although the Guardians bemoaned the expense, it was felt that the preventive operation had been a success, not least because the Guardians had been 'aided most cordially by the Municipal Authorities'.¹⁵⁰ Administratively, therefore, cholera was being treated initially as another fever epidemic.

In the autumn of 1848 it was decided that, in the event of cholera breaking out, medical care for the poor would again be provided by the Guardians. Following instructions issued by the G.B.H. and the Poor Law Board, the Guardians made arrangements for providing medical aid. Steps were taken to equip the Mendicity Office for use as a cholera hospital and to acquire premises for use as a house of refuge.¹⁵¹ Meanwhile the joint Sanitary Committee (comprised of five Guardians and five Councillors) put a cleansing campaign into immediate effect. Placards and posters were distributed throughout the Borough informing the public of the Committee's intention to act upon any complaints of nuisances.¹⁵²

These measures were applauded by the local newspapers which had demanded positive action. The Leeds Times warned against 'Eastern fatalism' and urged the public and the local authorities to unite in 'the one great object of diminishing the circumstances and conditions which ... increase the virulence and fatality of the disease'.¹⁵³ The Leeds Mercury urged the authorities to 'bestir themselves' into undertaking comprehensive cleansing duties.¹⁵⁴ As these prescriptions indicate, both newspapers, like the G.B.H., were miasmatist in outlook. Interestingly, however, they believed that although sanitary measures would ensure that cholera would be 'shorn of his destructive powers', they were not a certain means of prevention. Consequently, the public was warned of the need for moderation and temperance and, even more importantly, prompt treatment of even the mildest bowel complaint.¹⁵⁵

2.3.3. THE OFFICIAL RESPONSE 1849

Although the epidemic did not affect Leeds in 1848, the Guardians continued to receive a steady stream of advice and instructions from the Poor Law Board and G.B.H., and continued to undertake nuisance removal work throughout the winter. However, visible public concern soon diminished. This situation changed when a spate of cases were reported in June 1849. That isolated cases of 'English' cholera and diarrhoea were occurring amongst the impoverished Irish community in the notorious Bank district, sparked off renewed concern. Warnings about the need for early treatment of diarrhoea, calls for sanitary vigilance and full details of the G.B.H.'s

preventive strategy once again began to appear in the local newspapers.¹⁵⁶ Although the cases were judged to have been diarrhoea rather than cholera, the joint Sanitary Committee began to put its preventive machinery into operation. The Mendicity Office was again prepared for the reception of patients, nurses were recruited, and whitewashing and other cleansing operations were started in the most insalubrious parts of the town.¹⁵⁷

Confirmation of cholera in July prompted the ubiquitous Dr Sutherland to visit the town.¹⁵⁸ As usual he conducted a sanitary inspection and held a meeting with the Sanitary Committee to discuss their preventive strategy.¹⁵⁹ Sutherland found the Guardians 'actively concerned with their sanitary duties', helped, he said, by the sanitary influence of recent rainstorms. He still pointed to the need for continued vigilance, especially in the poor areas.¹⁶⁰

In August and September, the Sanitary Committee, which met three times weekly, responded to the continued spread of cholera by taking steps to provide the type of medical relief favoured by the G.B.H. The town was divided into four medical districts, each with its own Medical Officer who was instructed to attend 'all cases of cholera', to visit all 'affected localities' and every house where the disease was prevalent to induce residents to give information about bowel complaints and nuisances. These Officers were also instructed to carry medicines with them to administer 'on the spot' to any person with diarrhoea.¹⁶¹ Where cases of diarrhoea were

discovered, patients were told to visit the District Medical Officer to obtain treatment, or to apply for medicines at either of the two dispensaries in the town. Every effort was made to separate cholera patients from the healthy. Where possible cholera cases were treated at home, diarrhoea patients in hospital and the healthy removed to the house of refuge. Nuisance removal and sanitary cleansing operations were concentrated on those districts where cholera prevailed.

From the outset, the Sanitary Committee's work was beset by problems and, despite repeated efforts to overcome them, never functioned efficiently. In the initial stages operations were hampered by labour problems, which led to the employment of paupers.¹⁶² Despite the fact that they were paid up to a shilling a day above the normal level of relief, and those engaged in emptying privies were each provided with free of shoes and trousers, they were not conscientious and had to be replaced.¹⁶³ Cleansing operations were further handicapped when several scavengers contracted cholera.¹⁶⁴

A more serious problem was the failure of local medical men to provide the Sanitary Committee with accurate returns of morbidity and mortality to help target preventive measures.¹⁶⁵ To overcome this problem, the Guardians wrote to all qualified medical men inviting them to notify all the cases of diarrhoea and cholera which they had treated.¹⁶⁶ When this failed, a circular was sent demanding returns of cases and deaths and warning that failure to comply would result in a £5 fine.¹⁶⁷ This changed matters a little, although medical men still

claimed they were unable to supply the requisite information. Some feared that members of the public would panic (and therefore 'predispose' themselves to the disease) if the full extent of the epidemic was known. Others, particularly those employed by middle class patients, did not inform the authorities because patients wished to avoid the stigma arising from a visit by a Poor Law doctor or sanitary operatives.¹⁶⁸

The ferocity of the epidemic appears to have taken the authorities by surprise. Despite their experience of dealing with fever and the fact that they were able to spend the first six months of the year in preparation, their attempt to provide a comprehensive system of medical relief did not match the crisis. At the root of the problem was the unprecedented demand for medical aid which placed enormous strain on the Guardians and their resources. The Guardians failed to meet objectives in two crucial areas of medical relief: hospital accommodation and house-to-house visitation.¹⁶⁹

During the early stages of the epidemic the public had to apply to the Leeds Workhouse for free treatment. As the epidemic worsened, the Guardians found it necessary to open an additional dispensary and, as the demand for medicines increased, to make the surgeries of all medical men in their employ 'a place of relief for all applicants.'¹⁷⁰ As this course of action suggests, there was a huge demand for free medical aid; according to several commentators, a large number of people were unable to procure either medicines or the

services of a Medical Officer. In fairness to the Guardians, it should be pointed out that once it became apparent that medical treatment and medicines were not reaching those most in need, every effort was made to improve the situation. Through the local newspapers and the distribution of placards and posters, the public had been warned of the need for prompt treatment of bowel complaints since the previous autumn. To press the message home, the Guardians employed bellmen to travel around the town to inform people that 'proper medicines' were available free of charge from any one of the district surgeons.¹⁷¹

Despite constant prompting many people did not seek treatment until they developed advanced symptoms.¹⁷² To overcome this and to assist with the identification of nuisances, the Sanitary Committee was urged to mount a more comprehensive system of house-to-house visitation.¹⁷³ As the epidemic intensified the Guardians encountered great difficulty in recruiting sufficient appropriately qualified medical men to act as medical officers let alone visitors. In the event, they had to appoint a dozen medical students and a number of lay visitors in mid-September.¹⁷⁴ However, a system of house-to-house visitation (involving 'medical visitation' to bring cases to treatment and 'lay visitation' for providing moral and sanitary advice) was not put into operation until the end of the month. Within a week or so it was abandoned because of the epidemic's diminishing virulence.¹⁷⁵

In the aftermath of the epidemic, assessments agreed that the Leeds Guardians, as in the fever epidemic of 1846-47, had done their utmost to preserve the public health. One local newspaper remarked that 'the Sanitary Committee have been fully equal to the emergency: when the public health was threatened they spared no expense'.¹⁷⁶ By contrast, Leeds Town Council and the Hunslet Guardians were subject to severe criticism, albeit for different reasons. In the early 1840s the Council had taken a keen interest in the public health issue as evident in the famous Improvement Act.¹⁷⁷ The benefits which should have accrued from this were not reaped as the Council came to be dominated by rate-payers' associations and councillors obsessed by 'economy'.¹⁷⁸ Although the Council obtained a further Improvement Act, under threat of cholera in 1848, it was unable to start work on a sewerage system as 'economist' councillors twice defeated motions authorising the project.¹⁷⁹ The crisis of 1849 focussed attention on the Council's long-standing neglect of its sanitary responsibilities and showed that no matter how assiduously the Guardians carried out the provisions of the N.R.D.P.A., temporary cleansing operations were not the answer to sanitary problems. The Leeds Intelligencer condemned the Council's 'murderous apathy' which, it argued, had handed over the poor to the extermination of 'typhus, scarlatania [sic] and cholera'.¹⁸⁰ The Leeds Times mounted an equally savage attack on the Council arguing that it was 'utterly inefficient', views echoed in a stream of letters to the press.¹⁸¹ An inspection of the town by Augustine Reach shortly after the epidemic had revealed that the Guardians'

cleansing campaign had been able to make little impact. He reported that sanitary conditions in 'vast districts of the opulent and important town of Leeds' were so appalling that 'virulent and fatal as was the recent attack of cholera here, my wonder is that cholera, or some other disease almost equally as fatal is ever absent'.¹⁸²

Whilst the Town Council was castigated for long term neglect of public health projects, the Hunslet Guardians were attacked for the sluggish and half hearted manner in which they implemented the N.R.D.P.A. The Leeds Times mounted a furious attack on them. It was said that they were loath to tackle the many nuisances in the area and especially those created or presided over by wealthy property owners.¹⁸³ This attack drew an immediate response from the Secretary to the Hunslet Guardians who denied accusations of parsimony and complacency. He pointed out that members of the Guardians Board of Health had inspected sanitary conditions and had ordered workmen to empty privies and ashpits, cleanse sewers and drains and issued one hundred and fifty notices for 'removal of nuisances, without respect of persons'.¹⁸⁴ Whilst he did admit that sewerage and drainage in Hunslet were defective, he argued that the situation could not be effectively remedied by temporary measures. 'Rome', he argued, 'was not built in a day ... and Hunslet cannot be sewered in a week'.¹⁸⁵

2.3.4. THE MIDDLE CLASS

Throughout the cholera season, certain members of the middle class endeavoured to alleviate suffering amongst the poor through voluntary action. For example, shortly after the epidemic began, but well before the Guardians had organised sanitary or medical preventive measures in Hunslet, a local chemist provided the poor with free acid for use in cleansing operations. Mr Waterton, owner of an Alkali Works, distributed his renowned 'powders' to anyone requiring treatment for premonitory diarrhoea and other bowel disorders.¹⁸⁶ As the epidemic intensified and the demand for hospital treatment increased, Waterton allowed the Guardians to use a large room at his works as a cholera hospital and provided a temporary wash-house for the use of the poor.¹⁸⁷ That these hospital facilities were the result of a private initiative suggests that criticism was justified.

In the Leeds Union District, charitable work and gestures complemented rather than compensated for official measures. Visiting the poor, whether in an official or voluntary capacity, was considered to be a valuable exercise because, in addition to ensuring that people sought immediate treatment and assisting with the identification of nuisances, it had a moral effect in alerting the poor to the dangers of intemperance and other vices.¹⁸⁸ Several weeks before the Sanitary Committee's visitation scheme was put into operation, unofficial visitors were active in some of the town's most notorious districts. A local newspaper cited the efforts of

two 'ladies' who gave unremitting assistance to the poor of the Bank district as just one of many 'instances of benevolence' which was helping to relieve 'the sombre aspect of suffering and privation'.¹⁸⁹ Religious groups also visited the poor to provide help and solace and, no doubt, to preach. Throughout the epidemic, members of the Leeds Town Mission were constant companions to victims.¹⁹⁰ Volunteers from the Church District Visiting and Benevolence Society were reported to be 'extremely active ... investigating cases of distress arising from cholera' at the end of the epidemic.¹⁹¹ Religious activity was not confined to work amongst the 'deserving poor'. The Rev Dr Hook's offer to administer religious instruction and provide spiritual consolation to 'inmates' at the cholera hospitals was gratefully accepted by the Leeds Guardians.¹⁹²

People who acted as visitors did so at great personal risk. According to contemporary theories of disease causation, cholera could be caught from either from the miasmatic air in affected districts, and perhaps from contact with a victim. In addition to the obvious danger of the disease, visitors also ran the risk of receiving a hostile reception from the working class. As Smith of Deanston noted when compiling his report on the Health of Towns in 1845, contact between the classes in certain parts of Leeds was minimal, and middle class forays into working class districts were likely to meet with taunts, insolence, rudeness and jealousy.¹⁹³ There were, however, safer ways in which middle class people could help the poor.

By mid-September the epidemic had led to financial hardship in many working class families. Recognising this, the Mayor and several 'influential townsmen' opened a subscription list intended to ease suffering and distress amongst the poor.¹⁹⁴ Donations were to be used to provide food, bedding, and clothing for people who had suffered 'on account of the prevalence of cholera'. As was the case with other acts of charity, it was hoped that the main recipients would be the deserving poor, who, it was argued, were 'struggling, by industry and self privation, to avoid becoming chargeable to the rates of their respective townships'.¹⁹⁵ The subscription list raised a total of around £500. Although this was only one fifth of the sum contributed to a similar fund set up in 1831-32, it was actually more than many local Boards of Guardians spent on sanitary measures during the epidemic.¹⁹⁶ Moreover, many people chose to make donations to alternative funds, most notably Church collections which were held at special services or on the Day of Humiliation.¹⁹⁷ This particular form of middle class response provides further evidence for Morris's claim that voluntary funds collected for the poor were central to organised class relationships in Leeds in the first half of the nineteenth century.¹⁹⁸

Throughout 1848-49 the public was advised that were a number of steps they could take to augment official preventive measures.¹⁹⁹ They could protect themselves and their families by paying attention to their diets, avoiding intemperance, seeking immediate treatment for bowel disorders and through

bodily hygiene. A newspaper proffered a somewhat unusual explanation of why bodily hygiene was of the utmost importance during the epidemic. Departing from the more usual 'filth explanation', which saw the body as an extension of the home or neighbourhood, it warned, in humoral fashion, that the body rid itself of waste material through the lungs, skin and bowels and, if any of these 'exits' was blocked, excessive strain would be placed on the others. Therefore, it continued, 'daily ablution' was imperative in order to keep the pores open and to avoid placing extra strain on the bowels, a development which would lead to looseness and premonitory symptoms.²⁰⁰ Other calls for sanitary vigilance were based on the much more widely held belief that if people used 'more brooms and water than less medicine would be needed'.²⁰¹ Every working class person was urged to regard themselves 'a sanitary commissioner'.²⁰² It was said that official measures would be to no avail unless they were complemented by self-help, a message reinforced by the press. Long before the first cases, people were informed of the benefits arising from liberal use of chloride of lime which, it was claimed, acted as 'a safeguard in contagious disorders' and 'entirely destroys the unhealthiness of the atmosphere'.²⁰³ Advice of this type shows how the threat of cholera was used by the middle class in an attempt to 'civilise' the working class; it was actually said that, 'Cleanliness was ... next to Godliness'.²⁰⁴

The experience of the second cholera epidemic persuaded a significant number of local medical men and officials to argue

that cholera was or could become contagious, in much the same way as analysis of the spatial incidence of the first by Robert Baker boosted miasmatic thinking.²⁰⁵ Until the epidemic was well underway, all newspapers and the majority of local medical men were decidedly miasmatic in outlook. In June, in a report which could just as easily have appeared in one of its rivals, the Mercury mounted an attack on the contagionist position. Echoing the views of the G.B.H., it announced that under no circumstances was cholera contagious and denounced the various preventive measures and responses associated with contagionist theory (quarantine, cholera hospitals, panic and flight from the sick) as 'supererogatory evils'.²⁰⁶ Little over a month later the paper's confidence had been dented. Having witnessed and reported cholera's progress in Hunslet, the paper conceded that the deaths there were too 'numerous and divided' to be attributed to 'predisposing causes ... or ... to sanitary defects'.²⁰⁷ Cholera's spread to the middle classes added to the growing doubt surrounding the miasmatic theory of transmission. Both the Mercury and the Leeds Times were puzzled by the deaths amongst the respectable classes. How, pondered the former, could cholera claim the life of Councillor Wilkinson, who was a 'gentleman of very regular and temperate habits ... not in anyway predisposed to the disease?'²⁰⁸ The paper went some way to answering its question a month later when, in an editorial, it admitted that, 'we can't resist the evidence of a certain degree of infectiousness'.²⁰⁹

Watching cholera spread into every part of Leeds and claiming the lives of both the middle and working class were not the only factors which persuaded the local newspapers to revise their opinions on the disease's mode of transmission. Well before the epidemic 'peaked', the Intelligencer opined that of the various strands of evidence which undermined anticontagionism, the disease's tendency to strike members of the same family network who came into regular contact with each other, but did not live together was the most powerful.²¹⁰ The experience of the unfortunate Craven family of Cavalier Street, Bank, was cited by all the newspapers to illustrate this point.²¹¹ Cholera was introduced into the Craven household by Mrs Craven after she had washed bedclothes belonging to a cholera patient. She, her husband and one of their children developed symptoms and died within five days of each other. After visiting the stricken family, Mr Craven's brother, who lived in a different area of the Bank, quickly developed symptoms and passed the disease on to his wife. Cholera spread to other members of the extended family killing a total of eight people in little over a week. In the view of the Leeds Times, the ways in which one case in a locality was followed by others and cholera spread through families was sufficient to 'cast doubt on the non-contagionist view'.²¹² When the epidemic subsided, the paper, which had earlier rejected contagionist theory said explicitly that the experience of the last two years 'points to contagion'.²¹³

The newspapers' move towards a more contagionist stance was paralleled by a similar shift amongst medical men. As was

the case nationally, local medical men were divided about cholera's mode of transmission and theories of disease causation in general.²¹⁴ As the epidemic progressed, however, it was reported that the majority of local medical men began to argue that there were clear signs that cholera was, or could become, contagious. The severity of the epidemic, deaths amongst people who were not predisposed to cholera, the apparent futility of preventive measures and, above all, the disease's tendency to pass from person to person 'though they lived in different areas ... and ... under different circumstances' persuaded many 'medical men to change their opinions and believe that cholera [was] infectious'.²¹⁵ Mr Radcliffe, a Town Surgeon in the employ of the Leeds Guardians, openly admitted that observing the disease's spread convinced him that cholera was contagious.²¹⁶ Other members of the profession were more cautious and argued that cholera was not as contagious as smallpox or scarlatina, but still expressed a belief in 'a certain degree of infectiousness'.²¹⁷ A number of arguments were advanced to explain how cholera could be communicated from person to person. A report in one newspaper argued the disease became contagious when 'fear [was] a predisposing cause'.²¹⁸ Mr William Thorp, Secretary to the Geological and Polytechnic Society of the West Riding, sounding rather like John Snow, asserted that cholera was most likely to be communicated from person to person where the healthy washed patients' clothes or bedding, if they touched the corpses of the dead, or if cholera faecal matter entered the stomach of a healthy person.²¹⁹

Few medical men denied that miasmas were responsible for the generation and spread of cholera, but according to the press, fewer still were prepared to deny that the disease could become contagious under certain circumstances. However, none of the controversial measures from 1832 and based on contagionism (compulsory isolation of the sick in cholera hospitals, sanitary cordons and immediate burial of the dead) were adopted by the joint sanitary committee or the Guardians in 1849. Although some victims were treated in hospital, this was due to difficulties in recruiting staff for home nursing rather than a belief in the need for isolation. It should be stressed that certain Guardians probably shared the view that cholera could be communicated from person to person. In 1847, they concluded that fever was spread by human agency, describing how the disease had been introduced to Leeds by Irish immigrants and had subsequently 'extended to the English Poor'.²²⁰ This view may well have been reinforced by advice they received in 1849 from Mr Austin, Secretary to the Poor Law Board. In January, Austin wrote to the Guardians, instructing them to ensure that their medical officers inspected tramps and vagrants entering the town 'to prevent as far as possible the introduction and spread of cholera and other dangerous disorders'.²²¹ Whilst the Guardians did not become embroiled in the debates over cholera's cause and mode of transmission, they did adapt their preventive strategy to incorporate a number of precautions which were consistent with the view that cholera could be spread by the sick and their possessions. As the Intelligencer put it, 'the infectious nature of the malady [was] generally entertained and acted

upon'.²²² The Guardians did their utmost to ensure that cholera patients who received 'in-door' relief were kept separate from people using the house of refuge and they helped with the early interment of the dead.²²³ Also, they took what in 1849 was the highly unusual step of burning beds, bedding, clothes and other 'infected' possessions belonging to impoverished cholera victims.²²⁴ The fact that 640 replacement beds (nearly one bed to every two deaths), as well as numerous blankets and counterpanes were issued on the rates by the end of September suggests that this precaution was amongst the Guardians' highest priorities. Similar measures were eventually adopted in Hunslet at the order of the Secretary to the Guardians who also questioned 'those who attribute cholera solely to miasma'.²²⁵

2.3.5 THE WORKING CLASS.

Although self-help featured in the working class response to the epidemic, it did not always manifest itself as the authorities hoped. Whilst many people complied with some of the advice issued by the authorities and co-operated with specific official preventive measures, others did not. The reasons for this were many and varied. However, an examination of attitudes and behaviour shows that two related factors: (i) past experience of epidemics in general and memories of 1832 in particular; and (ii) a widespread belief in contagionism, played a major role in determining working class responses.

In 1845 Smith of Deanston had asserted that only with great perseverance, middle class visitors to the working class districts of central Leeds would gain their confidence of the poor.²²⁶ During 1849, Sutherland found that this was not necessarily the case. In many instances, he reported, lay and medical visitation had not had the desired effect. Although there are no records of working class hostility to visitors, there is evidence which suggests that the advice they and other officials issued was ignored or rejected. Sutherland claimed that a significant number of cholera deaths were due to 'the neglect of the people themselves'.²²⁷ On numerous occasions, he stated, people simply ignored official instructions about premonitory diarrhoea, failed to call the Medical Officers, denied they were ill to Medical Officers, or refused to take prescribed medicines. Such behaviour, along with a disregard for sobriety and cleanliness, argued a local newspaper, was only to be expected from the 'apathetic poor', who constituted 'a very numerous body'.²²⁸ Sutherland and the Mercury were not alone in such views. In some middle class quarters it was said that the poor were not remedying sanitary deficiencies in and around their homes. Referring to the poor in Hunslet, Mr Bormond, a Temperance Domestic Missionary, said that he 'had never conversed with people so ignorant of the simple laws of health ... nor less disposed to be instructed'.²²⁹ Whilst it was felt that some sections of the working class were ignorant, indifferent and uncooperative, they were also accused of abusing the Guardians' (and ultimately the rate-payers') generosity. For example, the Hunslet Guardians initiated legal proceedings action against a

man who had claimed twice for his parents' funeral expenses.²³⁰

A variety of factors suggest that the people who criticized working class were somewhat harsh in their judgement. Cases of fraud and abuse undoubtedly occurred and received widespread publicity, yet they were relatively few in number and can hardly be regarded as characteristic. With regard to Sutherland's complaints it should be pointed out that thousands did apply for medical aid. Indeed, the demand for treatment was such that the Guardians had to increase the amount of hospital space and employ more medical men, nurses and auxiliaries on several occasions. Another point which should not be overlooked is that for a variety of reasons, many people preferred alternative forms of treatment to those offered by the authorities. This was certainly the case in Hunslet where Mr Waterton's cholera powders were immensely popular. An attempt by the authorities to force Waterton to withdraw his offer of free treatment met with a storm of protest and prompted over three thousand people to sign a petition demanding that he be allowed to resume distribution of his powders.²³¹

Elsewhere in the Borough, it seems that alternative treatments were sought by ever increasing numbers of people. 'Quacks', announced a local newspaper, 'are placarding about their chemicals, urging their infallibility, and the deceived and the ignorant ... are ready enough to believe them'.²³² Quacks were not the only people to enjoy increased trade as a

result of the working class preference for alternative treatments, tobaccoists benefited from the belief that smoking was a valuable specific against cholera.²³³

One can surmise that many treatments were rejected simply because experience showed that they did not work. Although the notion that people lacked faith in official advice is difficult to prove, there is clear evidence to show that the working class confidence in other aspects of the preventive machinery was minimal. This is not to say that there was open resistance to these official measures, rather that on several occasions it was ignored and alternative actions taken.

When mortality mounted in Hunslet at the beginning of September, people followed measures adopted in 1832 and lit bark fires.²³⁴ Other methods of prevention believed to have been effective in 1832 were revived. According to local rumour, none of the employees at Bower's chemical works had contracted cholera during the first epidemic. This was remembered in 1849, when people congregated around Bower's and similar manufactories to inhale the acrid fumes in the belief that chemical emissions from the works would ensure immunity. It took the death of an employee at a local tannery to convince people that their efforts were in vain.²³⁵

Working class responses to the epidemic (and, one must presume, scepticism about official modes of prevention) were influenced by popular belief that cholera was contagious. The belief in contagionism was still pervasive nationally and had

influenced popular responses to fever in 1847. During these epidemics, it was reported that large numbers of victims were left to die alone in their houses 'owing to the dread of fever' which meant that 'friends and neighbours would not go near them'.²³⁶ Despite official declarations at the beginning of the epidemic stressing that cholera could not be communicated from person to person, experience appears to have strengthened belief in contagionism. This was shown by attitudes and reactions to cholera patients. After recovering from cholera, a man who resided in the Bank district recalled how none of his friends or neighbours would visit him; elsewhere, blankets and other items discarded from the homes of the sick were left in the streets because people were afraid to touch them.²³⁷ According to Councillor Ellison who, along with four colleagues, made a detailed inspection of the town during the epidemic, people were not only frightened of coming into contact with cholera patients, they were also afraid of approaching or touching the corpses of victims. Throughout the epidemic, coffin makers reportedly plied themselves with drink before starting work believing that it would afford them a degree of protection.²³⁸ Popular contagionism had an adverse effect on trade. Retailers suffered because people were reluctant to mix with strangers, and commercial travellers from the town could not sell their goods because people were 'afraid of the cholera being carried with them'.²³⁹ The belief in contagionism also posed problems for the Guardians. Additional hospital facilities were needed as a direct result of 'the friends of the sick having declined to render that assistance which was required of them' through

fear of contracting the disease.²⁴⁰ However, it should be noted that large crowds continued to gather at cricket matches, dog fights and religious services.²⁴¹

2.3.6. LOCAL SANITARY ADMINISTRATION AFTER 1849

The authorities in Leeds acted with an unusual degree of flexibility during the 1849 cholera season, widening their preventive strategy to include a number of 'precautions suggested by the facts'.²⁴² Although this pragmatic approach saw them adopt a number of measures which were not approved by the G.B.H., it should be stressed that these were implemented alongside rather than in place nationally recommended policies. As such, it seems correct to argue that although the miasmatic doctrine was questioned, it was not rejected. This point was illustrated by renewed and intense pressure for immediate sanitary improvements when the epidemic ceased. The 1842 and 1848 Improvement Acts had rationalised sanitary administration and vested the Council with comprehensive powers for effecting large scale improvements.²⁴³ The 1848 Act enabled the Council to start work on a comprehensive sewerage and system for the three heavily populated townships of Leeds, Hunslet and Holbeck. Yet all this, in Hennock's words, led to 'much talk [but] no action taken'.²⁴⁴ Whilst the G.B.H. believed that the level of cholera mortality in the summer of 1849 was due in part to the incompleteness of the Guardians' preventive measures, local opinion exonerated the Guardians and pinned the blame on the Council, recognising that it was the only body with the power to bring about

lasting improvements.²⁴⁵ Witnessing the Council's efforts to assist the Guardians in implementing anti-cholera measures in the summer of 1849 provoked a sarcastic response from a the Intelligencer. 'Cholera', it declared, 'is doing its work as a benefactor', with the Town Council suddenly having 'a patient ear for woeful recitals of imperfect sewers and pestilential deposits'.²⁴⁶ Increasingly, public opinion crystalised around the view that temporary cleansing measures were futile in the face of Leeds' massive sanitary problems. 'Unless effective sanitary measures be adopted', warned one report, the town would continue to be 'subject to periodic visits of cholera, typhus and other forms of the plague.'²⁴⁷

Whereas recent epidemics of fever and scarlatina had failed to break the resolve of economist Councillors, the shocking effects of the 1849 cholera epidemic produced a remarkable about turn. At the beginning of October the Council admitted that the absence of sewers had made a major contribution to the intensity of the epidemic and voted to reverse its earlier decision to halt the sewerage scheme.²⁴⁸ Predictably, news of the decision was welcomed by reformers.²⁴⁹ That it was cholera that had persuaded the Council's change of heart was widely recognised. One local newspaper went so far as to refer to 'The Boon of Cholera', arguing that the epidemic had taught the Council and public a fearful lesson which had 'borne its fruits'.²⁵⁰ Work on the new sewerage scheme began in earnest in the spring of 1850 and five years later some sixteen miles of sewers had been laid.²⁵¹

FOOTNOTES TO PART 2(A)

1. W.M. Frazer, The History of English Public Health, 1950, pp. 61-2.
2. C. Creighton, A History of Epidemics in Great Britain, Vol 2, p. 841. However, 419 deaths were reported in London between September and the end of December.
3. Sheffield Times 16.6.1849.
4. BPP, XXIV, 1849, 137, Report of the G.B.H. on Quarantine, pp. 1-51.
5. S. Szreter, ed, 'The General Registry Office and the public health movement, 1837-1914', Social History of Medicine, 4, 1991, pp. 400-520.
6. R.J. Morris, Cholera 1832: The Social Response to an Epidemic, 1976, pp. 60-61.
7. Hull Advertiser, (HA) 29.9.1848 reported that there were three deaths on the ship. The same figure is given in The Lancet, ii, 1848, 386.
8. Times, 19.10.1848; HA, 20.10.1848.
9. HA, ibid.
10. Times, 23.7.1849.
11. Sculcoates Board of Guardians (SGB), Minutes, 24.7.1849.
12. Sir H. Cooper, 'On the Cholera Mortality in Hull during 1849', Journal of the Statistical Society, 16, 1853, 1.
13. Lancet, ii, 1849, 463-465.
14. BPP, 1850, [1274] XXI, Report from the G.B.H. on the Epidemic Cholera of 1848 and 1849. Appendix A, by Dr Sutherland, (Sutherland Report), p. 104.
15. Ibid., p. 158.
16. HA, 8.10.1847; 5.11.1847.
17. Ibid., 5.11.1847.
18. Ibid., 19.11.1847.
19. Ibid., 26.11.1847. Also Lancet, i, 1848, 55, which recommended the report as 'a model in instances where a good plan is required'.
20. Report of the Sanitary Committee of Hull Medical Society on the Sanitary State of the Town, (Report of the

Sanitary Ctte. HMS) 1847, With an Introduction by Stephen Bryant, 1977, p. 26.

21. B. Foster, Public Health in Hull in the Nineteenth Century, unpublished MPhil Thesis, University of Hull, 1979, p. 41.
22. Cooper, *ibid*, note 12 above, pp. 1-3.
23. Report of the Sanitary Ctte. HMS, *ibid.*, note 20 above, p.27. The committee's view that sanitary conditions could not be improved until all 'matters affecting the public health' were carried out by one authority was shared by members of the public. A paper published a letter from local man which suggested that if the various bodies responsible for public health duties could not be united, then, in the event of cholera establishing itself, plans should be drawn up to allow the formation of a Council of Health comprised of medical men, clergymen, the Town Council and two sets of Guardians, which should be responsible for all sanitary and medical precautions. HA, 12.11.1847
24. HA, 7.1.1848.
25. *Ibid.*, 12.5.1848.
26. *Ibid.*, 21.7.1848.
27. *Ibid.*, 4.8.1848. This prompted a furious response from the paper which used its editorial to lambast the Mayor and councillors for what was regarded as their negligence. The paper warned that 'the dire alarm will be when cholera does appear without our being prepared' and added that 'we dislike needless and unnecessary alarm as much as the Mayor ... but their is safety, not alarm in a state of preparedness'. *Ibid.*, 11.8.1848.
28. Times, 29.9.1848.
29. Hull Packet, (HP), 29.9.1848.
30. HA, 29.9.1848. records that as an additional precaution the bodies of the sick were to be interred at sea.
31. Times, 17.10.1848.
32. HA, 29.9.1848.
33. Hull and Eastern Counties Herald, (HCEH), 19.10.1848.
34. Times, 17.10.1848.
35. HA, 13.10.1848.
36. Times, 17.10.1848.

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37. HP, 13.10.1848.
 38. HA, 20.10.1848.
 39. Ibid., 29.9.1848.
 40. Sutherland Report, op cit, note 14 above, p.101.
 41. HCHE, 12.10.1848.
 42. C. Beckett, Public Health in Hull 1848-71: Being a study of the work of the L.B.H. after the first P.H.A., unpublished MPhil Thesis, University of Hull, 1984, p. 95. Also see: HP, 22.10.1848. which argued that the P.H.A. was 'desperately needed' in Hull.
 43. HA, 27.10.1848.
 44. The process of establishing a L.B.H. was necessarily time consuming. After the petition had attracted the required number of signatures, the G.B.H. had to send one of its Inspectors to hear evidence from all interested parties before reporting back to the Board on the manner in which the P.H.A. could be enforced. Thus, before the Act could be applied a series of meetings had to be held and a comprehensive report compiled. See: U.R.Q. Henriques, Before the Welfare State; social administration in early industrial Britain, 1979, p. 136; and Beckett, op cit, note 42 above pp. 95-96.
 45. Foster, op cit, note 21 above, p. 294.
 46. Times, 23.7.1849.
 47. Sutherland Report, op cit, note 14 above, p. 101.
 48. Sculcoates Board of Guardians, Financial Records 1849.
 49. Report of the Sanitary Ctte. HMS, op cit, note 20 above, p.8.
 50. Sutherland Report, op cit, note 14 above, p. 101.
 51. HA, 14.9.1849.
 52. PRO MH 12 14306 The Poor Law Board sent a copy of the G.B.H.'s 'Directions and Regulations' to the Hull Guardians in August 1848. Also see Sculcoates, Minutes of the Guardians, 3.7.1849. Records that the Guardians received a copy of the G.B.H.'s 'Fourth Notification'.
 53. HA, 20.7.1849.
 54. Ibid.
 55. SBG, Minutes, 17.7.1849; 24.7.1849.

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56. HA, 20.7.1849.
 57. Ibid., 3.8.1849.
 58. HECH, 16.8.1849.
 59. Ibid., 23.8.1849.
 60. E. Gillett and K. MacMahon, A History of Hull, 1980, p. 259.
 61. HECH, 6.9.1849; HP, 14.9.1849.
 62. HA, 7.9.1849.
 63. Sutherland Report, op cit, note 14 above, p. 102.
 64. Ibid.
 65. Ibid.
 66. HA, 14.9.1849.
 67. Sutherland Report, op cit, note 14 above, pp. 102-103.
 68. HA, 14.9.1849.
 69. Sutherland Report, op cit, note 14 above, p. 104.
 70. HA, 5.10.1849.
 71. HA, 13.8.1849.
 72. Gillett and MacMahon, op cit, note 60 above, p. 275.
 73. A.S. Wohl, Endangered Lives; Public Health in Victorian Britain, 1983, p. 124.
 74. HA, 7.9.1849.
 75. Ibid.
 76. Ibid.
 77. HECH, 6.9.1849.
 78. HA, 7.9.1849.
 79. HECH, 13.9.1849.
 80. HA, 27.7.1849.
 81. HECH, 13.9.1849.
 82. Ibid., 6.9.1849.
 83. HA, 20.7.1849.

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84. Ibid., 27.7.1849.
 85. HECH, 6.9.1849.
 86. Ibid., 13.9.1849. Although there are no estimates of the number of families or people who left the town, the fact that their absence had a detrimental affect on the local retail trade suggests that large numbers chose to take this course of action.
 87. Ibid.
 88. Ibid., 24.7.1849. The paper admitted this in an editorial at the end of July which stated that 'the press of Hull has been incessant in its teaching that it ... rested with the authorities to render the appearance of cholera ... all but impossible'.
 89. Foster, op cit, note 21 above, p. 299.
 90. HECH, 6.9.1849.
 91. Ibid., 16.8.1849.
 92. Ibid., 6.9.1849.
 93. Ibid..
 94. J. Sibree, Fifty Years Recollections of Hull, 1884, p. 91.
 95. HA, 12.10.1849. quoting a local vicar who wrote to the paper.
 96. Lancet, ii, 1849, 217-224.
 97. HA, 14.9.1849.
 98. Sutherland Report op cit, note 14 above, p. 103. Whilst Sutherland admitted that 'not a few' people in Hull died without medical aid, he was at pains to point out that this was not the fault of medical men. Indeed, he completely exonerated members of the local medical profession, stating that had it not been for their exertions, which in many cases were made free of charge, cholera mortality in Hull would have been significantly higher. Also see: HA, 5.10.1849. which also praised local medical men. It argued that the entire community had cause to be grateful to the profession for the energy and zeal with which its members had 'devoted themselves to the preservation of the lives of the people'. HA, 26.10.1849. records that even the Town Council extended official thanks to the medical community.
 99. Cooper, op cit, note 12 above, p. 350.
 100. Sutherland Report, op cit, note 14 above, pp. 103-106.

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101. See for example, HA, 13.7.1849; 7.9.1849. Also see the G.B.H.'s handbill Plain Advice to All During The Visitation of Cholera, 1849, which was issued after Sutherland's September visit and warned against the consumption of fish, tainted meat and vegetables, and stressed that 'Drunkards always suffer most'.
 102. Foster, op cit, note 21 above, p. 294.
 103. HECH, 13.9.1849.
 104. Beckett, op cit, note 42 above, p. 94.
 105. HECH, 13.9.1849.
 106. Manchester Guardian, 15.9.1849.
 107. HA, 13.7.1849.
 108. H. Cooper, The Borough of Hull Considered in Relation to the Health of its Inhabitants, 1849, p. 24. For Cooper cleanliness in the working man was a far greater virtue than in his rich neighbour on account of 'the difficulties and sacrifices necessary for its attainment'.
 109. James Smith of Deanston, Report to the G.B.H. on a Preliminary Enquiry into the Sewerage, Drainage, and the Water Supply and the Sanitary Condition of the Inhabitants of the Town and Borough of Kingston-Upon-Hull the County of York, 1850, p. 5.
 110. Cooper, op cit note 108 above, p. 18.
 111. Smith, op cit, note 109 above, p. 38.
 112. HA, 7.9.1849.
 113. HECH, 6.9.1849.
 114. HA, 28.9.1849.
 115. Foster, op cit, note 21 above, p. 303.
 116. Sutherland Report, op cit, note 14 above, pp. 105-106.
 117. Ibid., p. 106. Although Cooper expressed regret about the fact that the majority of applicants had to be persuaded to seek medical treatment, it is significant that the visitors testified to 'the high value which the poor set upon house-to-house visitation as a mark of attention to their welfare'.
 118. HA, 13.7.1849.
 119. Sibree, op cit note 94 above, p. 90.

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120. Morris, op cit, note 5 above, p. 173, states that in 1832 there was a psychological reason for tar burning, as seeing or smelling acrid fumes helped to reassure frightened communities that something was being done to counter the disease.
121. HA, 13.7.1849.
122. Sutherland Report, op cit, note 14 above, p. 103. Also see HA, 14.9.1849. which reported that 'there is not a place in the town where the poor ... can obtain a dose of medicine without paying for it.
123. Foster, op cit, note 21 above, p. 300, states that Hull's medical men were divided over cholera should be treated. Also see Gillett & MacMahon, op cit, note 60 above, p. 256 for details of the dispute which originated in 1832.
124. For Sandwith, see: Lancet, ii, 1849, 491.
125. HA, 13.7.1849.
126. Ibid.
127. Ibid., 21.9.1849.
128. Report of the Medical Superintendent of the Board of Guardians of Sculcoates Union, HA, 19.10.1849. For the deaths see Foster, op cit, note 21 above, p. 302.
129. Beckett, op cit, note 42 above, p. 94.
130. HECH, 6.9.1849.
131. Sibree, op cit, note 94 above, p. 91.
132. Beckett, op cit, note 42 above, p. 97.
133. For the role of medical men, see: Smith, op cit, note 109 above, pp. 76-80. For Myton Commissioners see HA, 12.7.1850.
134. Ibid., 67-68.
135. HA, 21.6.1850. Recent developments such as the decision of the Sculcoates Guardians to dismiss their Inspector of Nuisances and murmurings of the need for 'economy' acted as timely reminders to reformers that the muck interest still wielded considerable influence amongst the local authorities.
136. HA, 8.11.1850.
137. Ibid.
138. Foster, op cit, note 22 above, p. 41.

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139. Beckett, op cit, note 46 above pp. 101-102. The Sanitary Committee was formed to oversee and coordinate the work of the newly appointed Inspector of Nuisances in such areas as the prevention of epidemic diseases, the abatement of nuisances and the regulation of common lodging houses, slaughterhouses and fish curing establishments. A Works Committee was elected to supervise the work of the Surveyor. This was divided into three sub-committees, with responsibility for streets and highways, sewerage and drainage and cleansing and lighting.
 140. Leeds Mercury, (LM), 23.9.1848; 14.10.1848.
 141. Ibid., 16.6.1849; 23.6.1849.
 142. Leeds Intelligencer, (LI), 21.7.1849.
 143. Leeds Times, (LT) 29.7.1849. Also see Sutherland Report, op cit, note 14 above, p. 152.
 144. LM, 18.8.1849.
 145. All from Times, 19.8.1849 - 15.9.1848.
 146. Leeds Union Guardians (LUG) Minutes 11.10.1848.
 147. J. Toft, Public Health in Leeds in the Nineteenth Century. A Study of the Growth of Local Government Responsibility, Unpublished MA Thesis, University of Manchester, 1966, p. 51.
 148. Ibid., p. 49. Also see T. Dillon, 'The Irish in Leeds', Publications of the Thoresby Society, 54, 1971, 2. Dillon says that many were Irish immigrants who had come to Leeds in the somewhat forlorn hope of finding work.
 149. Toft, op cit, note 147 above, p. 50; LUG, Minutes, 9.6.47.
 150. LUG, Minutes, 16.6.1847.
 151. Ibid., 11.10.1848. Also see: Toft, op cit, note 147, p. 56.
 152. LUG, Minutes, 1.11.1848.
 153. LT, 14.10.1848.
 154. LM, 23.9.1848.
 155. Ibid., 30.9.1848; 14.10.1848. The question of how bowel complaints should be treated loomed large. In line with the directives issued by the G.B.H., people were advised to seek the aid of qualified medical men, preferably those employed by the Guardians, who would administer astringent medicines. Under no circumstances, it was warned, should people seek treatment from quacks or take

purgative medicines. Also see *ibid.*, 23.9.1848. which states that a local surgeon had published and distributed a pamphlet containing 'practical rules' for arresting cholera.

156. LI, 16.6.1849. & 23.6.1849.

157. LUG, Minutes, 20.6.1849; LM, 23.6.1849.

158. LM, 28.7.1849.

159. *Ibid.*

160. Toft, *op cit*, note 147 above, p. 58.

161. Sutherland Report, *op cit*, note 14 above, p. 121.

162. LUG, Minutes, 31.7.1849

163. *Ibid.*, 31.7.1849; 8.8.1849.

164. LT, 25.8.1849.

165. LM, 4.8.1849

166. *Ibid.*, 11.8.1849.

167. *Ibid.*, 18.8.1849.

168. Times, 15.8.1849; LI, 18.8.1849.

169. Toft, *op cit*, note 147 above, p. 59; LM, 23.6.1849. Where a report confirms that at the beginning of the month the Sanitary Committee earmarked the Mendicity Office for use as both a hospital and House of Refuge. Whether or not at this stage the hospital was for the treatment of diarrhoea or cholera cases is unclear. However, LUG, Minutes, 15.8.1849. and LI 18.8.1849. Indicate that as the epidemic intensified the facilities at the Medicity Office became inadequate. The Guardians were unable to provide extra hospital space on the premises because they had already erected a temporary morgue in the yard and had to re-open the fever sheds. Although the Guardians did everything in their power to find extra hospital space and to employ more nurses, washerwomen and helpers, the shortage of hospital space was such that many people who required treatment had to be turned away. More seriously, perhaps, the fact that the House of Refuge was in the same building as one of the hospitals, and both were on the same site as the temporary morgue, was hardly consistent with the G.B.H.'s advice.

170. Sutherland Report, *op cit*, note 14 above, pp. 121-122.

171. LM, 18.8.1849.

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172. Sutherland Report, op cit, note 14 above, p. 122.
173. LT, 18.8.1849.
174. LT, 15.9.1849.
175. LM, 6.10.1849.
176. Ibid., 20.10.1849.
177. E.P. Hennock, Fit and Proper Persons: Ideal and Reality in Nineteenth Century Urban Government, 1973, p. 192
178. Henriques, op cit, note 44 above, p. 123.
179. B. Barber, 'Municipal Government in Leeds 1835-1914', in D. Fraser, ed., Municipal reform and the industrial city, 1982, p. 70.
180. LI, 11.8.1849.
181. LT, 1.9.1849.
182. A.B. Reach, The Yorkshire Textile Districts in 1849, edited by C. Aspin, 1974, p. 35.
183. Ibid., 1.9.1849, also see LM, 7.9.1849.
184. LT, 8.9.1849.
185. Ibid.
186. LM, 4.8.1849.
187. Ibid, 25.8.1849; LT, 25.8.1849.
188. LI, 29.9.1849.
189. Ibid, 18.8.1849.
190. LM, 22.12.1849.
191. Ibid, 20.10.1849.
192. LUG, Minutes, 12.9.1849. Also see W.R. Stephens, The Life and Times of William Hook, 1878, Vol 2, p. 250.
193. BPP 1845, [602] XVIII, Second Report of the Commissioners on the State of Large Towns and Populous Districts with Minutes of Evidence and Appendix, (Part I and Part II), Appendix Part II to the Second Report, (Large Towns) p. 314.
194. LM, 8.9.1849; LT, 15.9.1849.
195. LM, 8.9.1849.

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196. C.J. Morgan, 'The Leeds Cholera Epidemic of 1832', Journal of Local and Regional Studies, 3 (1), 1983, 21. PRO MH 12, 152229, This minute states that the Leeds Guardians sanitary expenses for the six months including the epidemic came to £652.
 197. LM, 13.10.1849. For example, reports that £27 was collected in the outlying district of Chapel Allerton.
 198. R.J. Morris, Class, Sect and Party: The making of the British middle class: Leeds, 1820-1850, 1990, p. 207.
 199. LT, 18.8.1849. stated that after the authorities had accomplished all in their power 'much remains for the individual to do'.
 200. Ibid., 18.8.1849.
 201. LM, 8.9.1849.
 202. LT, 25.8.1849.
 203. Ibid., 21.10. 1849. People were warned also against half measures. Deodorization was dismissed as a palliative rather than a cure for sanitary hazards. 'Get rid of the nuisance', the paper urged its readers, and 'the smell will no longer be there'.
 204. Ibid., 28.7.1849. Once cholera was diagnosed, the authorities made brushes and lime available to the poor from the Manure Depot in Waterloo Street. Similar provision was made by the Overseers in Hunslet. Also see: R. Evans, Death in Hamburg: Society and Politics in the Cholera Years 1830-1910, 1987, p. 118. Evans argues that the movement to reform the sanitary habits of the poor was part of a wider middle class campaign to civilise the working class.
 205. R. Baker, Report to the Leeds Board of Health, 1833. Also see: Morgan, op cit, note 196 above, p. 24, who argued that although it was not Baker's intention to enter into the controversies over theories of disease causation, he made clear his miasmatist beliefs.
 206. LM, 23.6.1849.
 207. Ibid., 4.8.1849.
 208. Ibid., 25.8.1849.
 209. Ibid.
 210. LI, 11.8.1849.
 211. Ibid.; LM, 18.8.1849.
 212. LT, 18.8.1849.

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213. Ibid., 10.11.1849.
214. M. Pelling, Cholera, Fever and English Medicine, 1835-1865, 1978, pp. 181-197.
215. LM, 29.9.1849.
216. Ibid., 11.8.1849.
217. Ibid.
218. LT, 18.8.1849.
219. LM, 29.9.1849.
220. LUG, Minutes, 16.6.1849.
221. Letter quoted in Toft, op cit, note 147 above, p. 57. This was consistent the view expressed in M.A. Crowther, The Work House System: a History of an English Social Institution, 1981, p. 250, that 'the ancient fear that vagrants carried disease revived strongly during ... cholera epidemics'.
222. LI, 8.9.1849.
223. PRO MH 12 15229 letter to the P.L.B. 18.8.1849; cf. LM, 18.8.1849. Also, it should be remembered that the purpose of Houses of Refuge was not to ensure the separation of the healthy from the sick, but to enable the healthy from infected houses to escape the miasmatic atmospheres around their homes. For burials, see, LM, 29.9.1849.
224. LM, 15.9.1849.
225. LT, 8.9.1849.
226. Second Report, op cit, note 193 above, p. 314.
227. Sutherland Report, op cit, note 14 above, p. 121.
228. LM, 29.9.1849.
229. Ibid.
230. LT, 15.9.1849. The individual in question was said to have claimed two coffins and a sum of money from the Guardians in order to pay for the funerals of his parents, both of whom died of cholera. Both the Leeds and Hunslet Guardians had agreed to contribute to the funeral costs in cases where the deceased were unable to pay. Foster, however, had already received a payment of £17 from the Odd Fellows Lodge before he applied for financial assistance from the Guardians. The Magistrates took a dim view of Foster's actions, sentencing him to one month's imprisonment. LUG, Minutes, 26.9.1849, record that following the court case, the Leeds Guardians

introduced a more rigorous system of checking claims and took steps to retrieve money from people who had already received payments from funeral clubs or friendly societies. Also see: LT, 15.9.1849. which states that payments from Friendly Societies appear to have risen dramatically during the epidemic; in Morley, near Leeds, over £560 was paid to members by mid-September; elsewhere, several were reported to have completely exhausted their funds.

231. LT, 25.8.1849.
232. Ibid., 1.9.1849. All of Leeds' newspapers carried adverts for alternative remedies. Others openly backed alternative medical systems. For example, a radical local journal The People: Their Rights and Liberties, Their Duties And Their Interests, 66, Vol 11, 1849, p. 109, gave details of hydropathic cures for cholera and of a medicine which people could prepare themselves. All the ingredients were readily available from chemists.
233. LUG, Minutes, 15.8.1849.
234. LM, 4.8.1849.
235. Times, 8.8.1849.
236. For first quote, LM, 5.6.1849. For the second see: Leeds Improvement Act, Report Book, 29.9.1849. Cf. Times, 8.9.1849. which reported that many people in Leeds 'believed in cholera's infectious nature'.
237. LT, 6.10.1849.
238. Ibid.
239. Ibid.
240. PRO MH 12 15229, Letter from Leeds Guardians to Poor Law Board.
241. LT, 25.8.1849; 8.9.1849.
242. LM, 29.9.1849.
243. Barber, op cit, note 179 above, pp. 66-67.
244. Hennock, op cit, note 177 above, p. 199.
245. Sutherland Report, op cit, note 14 above, p. 111. For local feeling see: LT, 11.8.1849; 1.9.1849.
246. LI, 11.8.1849.
247. Ibid.
248. Barber, op cit, note 177 above, p. 68.

249. LT, 6.10. 1849. Opined that the Council had 'acted wisely in deciding to supply the borough with a large and complete system of main sewers'. LM, 6.10.1849; LI 6.10.1849. express similar views.

250. LI, 6.10.1849.

251. Hennock, *op cit*, note 177 above, p. 199. Also see A.W. Marrant, Description of the Leeds Sewerage Works, 1876, pp. 1-4.

PART 2 CONTINUED

2.4. BRADFORD

2.4.1. THE CHRONOLOGY OF THE EPIDEMIC

Although reports that cholera was affecting Hull in the autumn of 1848 were viewed with concern by the local authorities in Bradford, the disease did not manifest itself in the town until the summer of 1849.¹ The first scare of the year occurred in the second week of June, after medical men reported two fatal cases.² With the absence of further cases during the following fortnight, public and official scepticism about their diagnosis mounted. Even when an inquest found that the two deaths were due to 'Asiatic' cholera, the local Guardians were not fully convinced and decided that there was still no need to put preventive measures into effect.³ Hopes that the town might escape the epidemic, as it had in 1832, were dashed in late July with the news that further cases had been confirmed. A week later, the public was informed that a total of 'twenty five cases of death by cholera' had occurred in the Bradford Moor, New Leeds and Wapping areas of the town.⁴ Even this news failed to move one of the local Guardians who informed his colleagues that 'there had no doubt been a great deal of dysentery, as there always was at this time of year'.⁵ His claim that 'we have got the name cholera introduced into this country and we will never get rid of it', illustrates lay doubts as to the nature of the disease and medical expertise.⁶

Effectively, the debate over whether or not cholera was present ceased at the end of July, when it was apparent to the majority of Bradfordians that an epidemic had established itself and was beginning to spread. By 23 August a total of 71 lives had been claimed and the disease was said to be 'carrying death into every district of the Borough'.⁷ Two weeks and 127 deaths later, a local newspaper reported that 'deaths had been more numerous than at any other stage'.⁸ As had been the case in Leeds and Hull, the situation in Bradford worsened during the second week of September, when a record number of deaths, sixty two in all, was reported. After this, while there was a temporary rise in the number of new cases, the number of deaths fell. By the beginning of October the epidemic had gone into a rapid decline and with the news in mid-October that diarrhoea and dysentery were once again the prime causes of mortality, normality returned.⁹

2.4.2. THE OFFICIAL RESPONSE, 1848.

By the fifth decade of the nineteenth century Bradford, more than any other town in the West Riding, could lay claim to being the classic town of the industrial revolution.¹⁰ Yet Thompson has asserted that in the 1840s Bradford was still small enough for people of all social classes to have 'a shared if unequal experience of environmental deprivation', a fact which helped to facilitate the emergence of a rare consensus that sanitary reform was imperative.¹¹

One of the main obstacles to reform and improvement had been the archaic and chaotic system of local government.¹² Acknowledging that sanitary improvements were necessary proved to be easier than deciding how this goal should be pursued, either through extending the powers of the existing institutions of local government, or through replacing them with a new corporation. Historians who have examined the incorporation battle of 1846-47 agree that although it was fought on the issue of how sanitary reform should be achieved, much more was at stake.¹³ Essentially, the controversy boiled down to a bitter power struggle between two elite groups, the ascendant liberal bourgeoisie and the established Tory and Whig elite. Both factions attempted to win the support of working class rate-payers by playing on popular concern about sanitary conditions, the former arguing that improvements could not be achieved unless local government was reformed, and the latter blaming the aspiring bourgeoisie for creating public health problems and pointing out that incorporation would not necessarily mitigate sanitary evils.

After a protracted and at times vicious struggle, the liberal faction prevailed. In 1847, the Privy Council granted a Charter and Bradford became a municipal borough governed by a Mayor, fourteen aldermen and forty two councillors. Immediately, the Council elected a Sanitary Committee which took over the duties formerly carried out by the Commissioners and Board of Surveyors. Sub-committees for Scavenging, Causeways, Lamps and Street Watering were created; an

Inspector of Meat and Nuisances, an Inspector of Scavengers and a Surveyor appointed; and, in 1848, a number of by-laws passed to augment the Council's public health powers.

Bradford, like its immediate neighbour Leeds, was gripped by a serious fever epidemic in 1846-47 and this played a significant part in the restructuring of the Poor Law administration.¹⁴ The epidemic coincided with a severe trade depression and an influx of destitute paupers, many of them Irish, which added to the burden on rate-payers. It also highlighted the inadequacy of the Guardian's medical facilities, especially the shortage of fever accommodation. One possible solution to this problem, suggested by Alfred Austin, Assistant Commissioner to the Poor Law Board, was the construction of a new Union workhouse. This proposal won the support of several prominent Guardians but was bitterly opposed by others. Opposition came primarily from those who represented the out-townships and felt that rate-payers in their districts were having to shoulder the financial burden for problems which arose largely in the Bradford township. The row rumbled on into 1848 and was accompanied by a growing determination on the part of the out-townships to secede from the Union. Matters came to a head in the early autumn of 1848 when a dispute arose over the cost of providing medical relief and culminated in the division of the Union. Towards the end of September 1848 two new Poor Law Unions were formed: the Bradford Union which comprised the Bradford township, and the North Brierly Union which comprised the sixteen out townships.

While the fever epidemic was not the only factor which precipitated the split, its role in adding to the sense of crisis was, nevertheless, important. In very different ways, public health crises had contributed to serious political ructions in the period 1846-48 and, to a significant extent, to the re-structuring of local government in Bradford. Effectively, incorporation and the formation of the new Bradford Union provided the town with a new administration. The implications for public health policy were great. For the first time, there was at least a possibility that the Council would begin to make inroads into major problems, whilst the Guardians now had the opportunity of developing their workhouse policy and improving their hitherto lamentable record in the field of medical relief.

Despite the fact that the threat of cholera immediately followed a fever epidemic in 1846-47, neither local rate-payers nor the recently incorporated Council petitioned to have the Public Health Act applied to Bradford in the autumn of 1848. Moreover, although the town had a very high death rate, the G.B.H. did not seek to impose it either. Consequently, the responsibility for attempting to prevent the epidemic through the application of the N.R.D.P.A. was placed with the new Board of Guardians. They began by issuing placards and handbills describing the range and extent of their powers.¹⁵ Relieving Officers were also instructed to insist upon cleanliness in the homes of applicants before permitting out-door relief, 'so as to counter the effect of cholera'.¹⁶ The Guardians wrote to the Council inviting it to

form a joint Sanitary Committee, 'to carry out the objects of the General Board of Health'.¹⁷ For the purpose of administering medical relief, plans were made to divide the Union into separate medical districts.¹⁸ The only hitch in the preparatory arrangements involved a dispute between the Guardians and the Poor Law Board over how medical men should be paid. On the grounds of economy, the Guardians wanted to pay medical men a fixed salary while the Poor Law Board insisted they should be paid per case.¹⁹ The Board appear to have overruled the Guardians as when the epidemic commenced medical men were paid by case.²⁰

News of cholera's arrival in Britain was viewed with concern by the Council. The Sanitary Committee held a special meeting 'in consequence of cholera at Hull', which discussed how it might use its powers to help avert the epidemic. The meeting resolved to enforce rigidly the rules governing conditions in lodging houses and to ensure that other sanitary regulations were not broken.²¹ At a later meeting it was decided to appoint a sub-Committee to assist the Guardians in the removal of nuisances.²² Whether or not Bradford was subject to extraordinary levels of cleansing activity during the months after the N.R.D.P.A. was adopted is not entirely clear. Although the Act empowered the Guardians to undertake cleansing projects and to prosecute individuals for violating the law, and the Town Council had the power to abate minor nuisances, reports of marked increases in cleansing did not appear until the summer of 1849.²³

2.4.3. THE OFFICIAL RESPONSE, 1849.

Despite the apparent lack of action, the Guardians continued to make plans for dealing with the impending epidemic. In February 1849 they addressed the question of how medical relief should be provided. Their earlier resolution to divide the town into separate medical districts was brought into force and discussions began about the possibility of providing hospital facilities. Where this should be located proved to be a tricky issue.²⁴ The Council's Sanitary Committee had already considered the possibility of erecting a permanent fever hospital in 1848.²⁵ Whilst the Committee agreed this was desirable, and would be a great boon for poor families who could not provide 'the necessary care, cleanliness, ventilation, ... nursing and competent medical treatment', it ruled against such a move for two reasons. Firstly, it felt that priority should be given to removing the preventable causes of disease; and, secondly, because such a project was beyond the Council's jurisdiction. As such, the matter was passed on for the Guardians to consider.²⁶ The Guardians were in a more difficult position as the N.R.D.P.A. made them responsible for all medical precautions. They knew that a cholera hospital had been used in 1832 and was thought to have been instrumental in preventing a serious epidemic, yet as one of their Medical Officers pointed out, isolation accommodation had not prevented the spread of fever.²⁷ After due deliberation, the Guardians rejected a proposal to equip and prepare the vagrant office for use as a cholera hospital, a decision Thompson has attributed to the authorities'

unswerving belief in the miasmatic theory of disease causation.²⁸

Reports of suspected cases of cholera in June prompted an immediate response when a joint Sanitary Committee, comprising Councillors and Guardians, was formed.²⁹ Further action was not taken, however, until the end of July.³⁰ Cholera's spread then prompted the Guardians to hold an extraordinary meeting where precautionary measures were discussed.³¹ This decided that there was now sufficient reason to warrant a concerted attack on nuisances and with this in mind, resolutions were passed to appoint an Inspector of Nuisances, to order Medical and Relieving Officers to report all nuisances in their districts, and to distribute notices throughout the Union reminding the public of the powers the Guardians.³² It was also decided that a circular would be sent to all medical men in the Union requesting details of cases (premonitory and advanced) and, with the Watch Committee's approval, to ask the police to collect the reports and pass them on to the Union Clerk. The Sanitary Committee also resolved to meet daily to consider the reports and, if necessary, take further action.

The Guardians' prior reluctance to implement comprehensive preventive measures was criticised by a number of people.³³ Their reply was that the delay had been necessary so as not to create alarm amongst the public.³⁴ After the extraordinary meeting, however, cleansing and nuisance removal began in earnest. A deputation of Councillors and Guardians inspected those parts of East

Bradford where cholera was rife. In New Leeds, where the majority of the early cases and deaths occurred, they discovered 'abominations and nuisances ... which baffle description'.³⁵ By early August nuisance removal in New Leeds, nearby Bradford Moor and Wapping was in full swing. In addition to initiating cleansing measures and prosecuting people for infringing the N.R.D.P.A., the Sanitary Committee ordered that free chloride of lime should be given to the poor and took the unusual step of having stray dogs rounded up and destroyed.³⁶

August saw the Guardians introduce a number of medical precautions designed to prevent premonitory diarrhoea from developing into Asiatic cholera. A dispensary was opened at New Leeds where the poor could obtain medicines, and Mr Applewick, a spirit merchant, was instructed to supply free spirits to 'indigent persons' with cholera or other symptoms on production of a certificate signed by a surgeon.³⁷ Similarly, surgeons were empowered to issue certificates which enabled 'necessitous persons attacked by cholera' to borrow blankets and sheets.³⁸

Official efforts to contain the epidemic met with little success.³⁹ The Guardians responded by making free medicines available through Sharp the Druggist of Westgate, and, ominously, by ordering a hearse and employing an additional coffin maker.⁴⁰ Cholera's spread in August was not, however, blamed on the Guardians. Indeed, the Observer, edited by William Byles, a keen advocate of sanitary reform, believed

that the Sanitary Committee was using its powers to the full. In an editorial it stated that,

'The Board of Guardians continue to meet daily and are in union with the Sanitary Committee, exercising a praiseworthy zeal and energy in the hope of arresting the progress of this fearful visitation. Nuisances are everywhere disappearing as quickly as it is possible ... and no efforts are spared, either in the free distribution of medicine or the application medical aid to save the lives of those attacked'.⁴¹

At this stage, the paper's only grumble was that the powers the N.R.D.P.A. granted to the Guardians were inadequate. After regaling its readers with lurid details of sanitary conditions in New Leeds, and describing how, armed only with the limited powers of the Act, the Guardians were fighting an uphill battle, the paper declared that 'the condition of New Leeds loudly calls for an Improvement Act'.⁴²

Attitudes towards the Guardians changed abruptly around the end of the month when a sharp increase in the incidence of cholera prompted members of the public and the local press to scrutinise the system of medical relief. Just one week after he had issued his vote of confidence in the Guardians, the editor of the Bradford Observer began to voice serious doubts.⁴³ Initially, reservations were expressed about the way in which treatment was provided. Under the the poor could obtain free medicines from the temporary Dispensary in New Leeds and from a chemist in the town centre. Obtaining the services of a medical man, however, was much

more difficult. Contrary to the advice of the G.B.H., the Guardians had not set up the necessary machinery for medical officers to follow up applications. The effects of this were twofold. On the one hand it meant that people who required treatment rather than medicines could only obtain the services of a medical man through normal Poor Law procedures. On the other hand, it left the Guardians without a means of monitoring applicants' symptoms, of warning other family members of the need for prompt treatment of bowel complaints or of checking sanitary conditions. These shortcomings were recognised by one member of the public, who complained that many people were not receiving treatment because the Union Medical Officers were overworked, and urged that in view of the epidemic's severity, 'The Guardians should pass an order as would enable those who are seized with cholera ... to procure the readiest and best help ... without routine application to a Relieving Officer'.⁴⁴ The Observer took a similar stance, arguing that with the exception of providing free medicines and publishing the names and addresses of doctors in private practice, the Guardians had done little to provide treatment for the poor or to ease the pressure on their own Medical Officers.

In fairness to the Guardians it should be pointed out that when the epidemic intensified at the end of August, they did consider adopting 'additional precautionary measures'.⁴⁵ A proposal that the number of medical staff should be increased was rejected, only after Medical Officers informed the meeting that they were able to cope.⁴⁶ Nonetheless the

joint Sanitary Committee did appoint a number of nurses to attend 'necessitous families' at the beginning of September.⁴⁷

This did little to deflect criticism of official actions, which concentrated on the weakness of medical precautions. In the first week in September, the Observer reported that 'deaths have been more numerous in the previous week than at any other stage', and pointed out that the problems people faced in procuring medical treatment had not been overcome.⁴⁸ However, in mid-September, to counter what was fast becoming a crisis situation, the Guardians took a number of steps. They appointed nine extra medical men and all medical men in the Borough were requested to attend cholera cases for a fee of six shillings and sixpence per case.⁴⁹ An attempt to recruit more nurses, however, was unsuccessful as reports that several nurses had died deterred potential applicants.⁵⁰

The growing sense of crisis also led to greater urgency being attached to nuisance removal and cleansing operations. The Guardians believed that this was being hindered by local magistrates, not because they were reluctant to fine offenders, but because they were taking too long to do so. A deputation from the joint Sanitary Committee obtained promises from magistrates that they would speed up summonses.⁵¹ Additionally, extra staff were appointed to assist with sanitary operations in order that every house where cholera was reported could be cleansed and purified, further supplies of chloride of lime were made available to the public, and

members of the Sanitary Committee were sent to assess preventive arrangements in nearby Leeds.⁵²

Throughout the epidemic the Council and the Guardians worked well together. The latter concentrated their efforts specifically on those houses, streets or districts worst affected by cholera, and the Council undertaking nuisance removal throughout the town, usually in response to notices signed by local people.⁵³ Like the Guardians, the Council appears to have redoubled its nuisance removal programme in September.⁵⁴ As had been the case previously, the division of labour between the agencies was maintained. The Council dealt with the public's complaints about general nuisances such as pig styes, dunghills and middens, and the Guardians continued to concentrate their efforts wherever cholera prevailed.⁵⁵ Within a fortnight of the Guardians employing extra medical men and, with the Council, increasing sanitary cleansing activities, cholera began to decline. By the middle of the month the epidemic was over and sanitary and medical precautions were scaled down.⁵⁶

2.4.4 and 2.4.5. MIDDLE AND WORKING CLASS RESPONSES.

A shortage of appropriate evidence means it has not been possible to characterise separately middle and working class responses to cholera in Bradford.⁵⁷ Nevertheless, close scrutiny of the available sources has revealed a number of interesting reactions.

The epidemic revealed a degree of ambiguity in middle class attitudes to the poor. There was certainly a feeling that working class indifference to domestic hygiene and other 'moral shortcomings' contributed to the conditions in which cholera thrived. This led to typical attempts to reform the behaviour of the poor. For example, the Guardians ruled that from September 1848, relieving officers should not allow people to receive outdoor relief unless their homes were in a state of cleanliness.⁵⁸ The blame for insanitary conditions was not pinned solely on the poor. Several millowners were also admonished for neglecting sanitary conditions in and around their premises.⁵⁹ Moreover, as indicated above, there was widespread recognition that worthwhile environmental improvements could not be achieved through self-help measures. This view appears to have been shared by those who, in the summer of 1849, signed memoranda demanding that the Council took immediate action to remove nuisances across the borough.⁶⁰

Once the epidemic was confirmed, criticism of the working class shifted on to what was seen as their neglect of medical precautions. Medical officers alleged that their work had been impeded by the 'ignorance ... stupidity ... neglect and even dishonesty of the poorer classes' and complained of the difficulty they had encountered in persuading people to comply with their directions.⁶¹ Partly this was because the system operated through the Poor Law, although many people were also deterred by the fees sought by private practitioners.⁶² However, no attempt was made to excuse those

(few) people who were not suffering from cholera yet had claimed free blankets and brandy from the Guardians.⁶³

Although some middle class opinion expressed concern for the poor and supported the Observer's campaign for sanitary reform, voluntary action on the scale seen in other towns was absent. Indeed, other than through making donations on the Day of Humiliation and offering advice on prevention and cure through the newspapers, the only public attempt to assist the poor came from Messrs. Holmes and Allen, millowners of New Leeds, who appointed a surgeon to attend cases amongst their employees.⁶⁴

There does not appear to have been a particularly strong belief in contagionism amongst people of any class in Bradford. Although the Guardians reported that they were having difficulty in recruiting people to nurse the sick and that £5 to buy alcohol had 'to be given to the assistants of the Sexton to provide the means of preserving themselves from contagion', there were no reports of the public taking precautions which were consistent with contagionism.⁶⁵ This was confirmed by the willingness of people to buy the beds of cholera victims from a Union employee and, more especially, the fact that thousands factory hands joined together to go on factory excursions throughout September.⁶⁶ The latter prompted the Observer to say that, 'Cholera is not the only epidemic prevalent just now. There is a social epidemic of a very different and much more agreeable character ... the factory excursions which have become so common'.⁶⁷

2.4.6. SANITARY REFORM AFTER 1849.

The first British cholera epidemic is said to have had a greater impact than the later ones quite simply because it was the first. On a national basis this is correct, however, locally many towns, Bradford among them, had their first visitation in 1849.⁶⁸ In these circumstances, cholera still lived up its reputation as a shock disease. That cholera's decline coincided with the introduction of more comprehensive sanitary and medical precautions did not go unnoticed. The Observer justified its campaign and its detailed coverage of the epidemic, by arguing that its reports had 'awakened attention to the surrounding peril and prompted the more general employment of preventive remedies and measures'.⁶⁹ As a result, the paper claimed, 'after a long period of painful anxiety ... we begin again to breathe freely'.

That cholera was most virulent in the filthiest districts of the town was plain to see and acted to reinforce the view that insanitary conditions were responsible not only for the epidemic, but for ill health in general.⁷⁰ The logic of Chadwick's argument that disease caused poverty, was accepted in Bradford. The Observer asserted that, given the condition of New Leeds, it was, 'No wonder that the place was such a nursery of pauperism and disease'.⁷¹ Similarly, the Chairman of the Guardians declared that if the town were to purchase

the Leys district 'and pull all the houses down it would be a saving to it in the end'.⁷²

Long before the epidemic peaked, the limitations of the Guardians' sanitary powers, rather than a reluctance to use them was identified as the main deficiency revealed by the epidemic. Hence the appearance of a report in the Observer stating that in New Leeds, 'The root of the evil remains after the powers of the Guardians have been exhausted'.⁷³ It was argued that what the town needed was an Improvement Act which would empower the authorities to tackle long-standing and severe sanitary problems.⁷⁴ Both the Council and the Guardians were in agreement.⁷⁵

Acknowledging that incorporation had not been brought the hoped for benefits, the Council announced as early as June 1849 that it intended to apply for additional powers under an Improvement Act in order that existing by-laws could be enforced and new ones framed.⁷⁶ As part and parcel of the process, the Mayor, Titus Salt, announced that a committee was to be set to investigate the 'Moral Condition of Bradford'.⁷⁷ The report was delayed, but when it finally appeared in 1850, like similar reports, it shocked middle class opinion with graphic descriptions of the squalor and depravity. Its compilers, however, seemed to favour a solution to these problems based on moral regeneration rather than sanitary improvements.⁷⁸ This idea came under attack from various quarters, including the Bradford Observer which stressed that decent sanitation was a precondition of moral regeneration.⁷⁹

Although there was agreement about the need for sanitary improvements, the proposed Improvement Bill nevertheless sparked off a political controversy reminiscent of that which accompanied the application for incorporation. The Bill sought to strengthen the Council's hand by transferring the duties of the Board of Surveyors and Improvement Commission and by empowering it to pave and drain streets, clear polluted waterways, organise improved refuse collection and sewerage disposal, regulate abattoirs and improve the supply of water.⁸⁰ The Bill, drafted and promoted by leading Liberals, was opposed by Tories who believed it would lead to unnecessary expense and was motivated by Liberal greed for power. Conversely, a number of Liberals who sat on the Board of Surveyors also objected, believing it would strip away their power.⁸¹ In the event the Bill, though clearly sponsored by leading liberals, was presented to the Commons privately, thus denying the Council the opportunity to debate it. This further infuriated the Tories who retaliated by petitioning the G.B.H. to have the provisions of the Public Health Act applied to Bradford, despite their earlier having agreed with the Liberals that submitting to central control was undesirable.⁸² The shape and content of the Act, which became law in July 1850, was determined by Parliament and did not represent an outright victory for either side. Liberals were disappointed to find that the original Clauses relating to water and cemeteries had been struck out and a large part of the Public Health Act added. Tory hopes that the Bill

would be completely replaced by the Public Health Act were also dashed.⁸³

Whilst the 1849 cholera epidemic was central to both the creation of a climate of opinion favourable to reform in Bradford and the Council's decision to apply for an Improvement Act, there was a tendency for participants in the ensuing debates to lose sight of the sanitary issue as the application for the Improvement Act degenerated into a continuation of the power struggle between elite factions. Nevertheless, when the Act became law, it did mark a significant turning point. On the administrative front it established the Council as a L.B.H. and simultaneously disbanded the Board of Surveyors and Improvement Commission.⁸⁴ It also extended the Council's sphere of activities significantly.⁸⁵ In addition to taking over those areas of work previously carried out by the Surveyors and Improvement Commission - which included the upkeep of highways and paving - the Local Board was given responsibility for drainage, street lighting, building regulations and the inspection of lodging houses and abattoirs.⁸⁶ How vigorously these powers would be used without the stimulus of an epidemic crisis remained to be seen.

2.5. SHEFFIELD.

2.5.1 THE CHRONOLOGY OF THE EPIDEMIC.

As was the case in most West Riding towns, cholera's arrival in Britain in 1848 was covered in great detail by the Sheffield newspapers.⁸⁷ Public and official anxiety increased dramatically in early November, following reports that the disease had broken out. However, as the press was quick to point out, undue alarm was unwarranted as the cases were of 'English' rather than 'Asiatic' cholera.

Sheffield's next cholera scare occurred in July 1849, following the death of a local businessman who had returned from London suffering from what medical men said were the unmistakable symptoms of the 'Asiatic' form.⁸⁸ A further case was reported later in the month, when a local grinder contracted the disease, although public concern diminished when he recovered.⁸⁹ The incidence of diarrhoea was higher than usual and there was acute awareness of epidemics in other towns, yet there were no further reports of cholera cases until the end of August. On 24 August 'a sudden outbreak [of diarrhoea] occurred over the whole town' and two days later, a medical man was summoned to treat William Fish, a silver plater of Philadelphia, who was thought by his family to be suffering from severe diarrhoea.⁹⁰ The doctor found him in 'a state of perfect collapse', his body 'was cold and presented a blue aspect and all the other symptoms of Asiatic Cholera'.⁹¹ Despite receiving prompt treatment, Fish died less than twenty

four hours later. Sheffield differed from the other three towns in that medical opinion that cholera was present was immediately accepted despite the fact that late August marked the peak of the annual diarrhoea season. When medical men diagnosed further cases a cholera epidemic was immediately declared.⁹²

Although the disease affected a number of different districts during the first week of September, the number of fatal cases mounted only slowly. But in the week ending 15 September cholera manifested itself, 'to an extent calculated to cause serious alarm' in Attercliffe, and the total number of deaths rose to twenty.⁹³ The three week period after this saw the Sheffield epidemic peak, but on a much smaller scale than in towns of a similar size. During this period, cases and deaths were reported in most parts of the Borough, yet were concentrated in the Attercliffe, Wicker and Park districts. The total number of deaths in the Sheffield Union district rose to 33 by 22 September and to 53 and 67 in successive weeks. A further six deaths were reported during the following week, bringing the total to 73.⁹⁴ Only one more death occurred after this date and, by the middle of the month, the Sheffield Times was able to announce that epidemic cholera had completely disappeared and rejoiced that the town had escaped so lightly.⁹⁵

2.5.2 THE OFFICIAL RESPONSE, 1848.

Sheffield society at mid-century was still relatively homogeneous and was marked by close ties and empathy between the different classes. This helped to promote a radical political culture in which the interests of the working class was often to the fore, not least because of their participation in local politics. This was part cause and part effect of the growing influence of the radical Chartist Democrat Party which by the late 1840s dominated the Town Council and was also in the process of gaining control of the local Highway Board. From the mid-1840s the Council became increasingly progressive, championing the cause of workers in Britain and abroad. Because at this stage the Council lacked real power there is a temptation to dismiss its radicalism as gesture politics. This would be unfair, as it did strive to achieve practical reforms. Whilst public health was not the main concern of the Chartist Democrats, efforts were made to improve sanitary conditions. Following the passage of the first N.R.A. in 1846, the Council responded to popular opinion and formed its own Health Committee. Although the Sheffield Times reflected in 1849 that the Committee had been 'vigorously promoting sanitary measures' since its inception, the leader of the Chartists, Isaac Ironside, backed by working men, found it necessary to found a local branch of the Health of Towns Association to speed reform. Ironside was successful in persuading the Council to undertake a comprehensive sanitary survey in 1848 to provide the basis for future improvements. The significance of this was to increase

awareness of public health issues and help swing opinion behind reform. Thus when cholera threatened, the Guardians, who were themselves noted for having progressive and enlightened views, acted with the utmost vigour and were supported in this by the Council, the town's other sanitary agencies and the public at large.

Cholera's presence in Europe did not attract much attention in Sheffield until the beginning of 1848 when a local medical man, Mr Boulton, wrote to the Health Committee informing them of the disease's progress across the continent. Boulton warned that as the disease was following an identical route to the one travelled in 1830-31, Britain and, more especially, Sheffield, was unlikely to avoid the epidemic unless the local authorities and the public used 'all the precautionary measures which past experience points out as essentially necessary for the maintenance of health'.⁹⁶ 'Cleanliness, pure air, ... general health, temperance, avoiding all excesses, bodily and mental' were, he warned, 'the weapons we must all employ'. The Health Committee's decision to pass Boulton's letter on for publication in a local newspaper indicates that they took the threat of cholera seriously and shared his belief that 'to be forewarned is to be forearmed'.

Specific measures to avert the epidemic were not initiated until cholera was first diagnosed in Britain in the autumn of 1848.⁹⁷ Both of Sheffield's newspapers published the G.B.H.'s first and second Notifications, as well as

detailed advice.⁹⁸ The local authorities were reminded of the obligations and powers accruing to them under the N.R.D.P.A., and were urged to put cleansing operations into immediate effect and to make preparations for providing medical relief should the need arise. Responsibility for implementing the Act lay with the town's two Poor Law authorities, the Sheffield and Ecclesall Bierlow Boards of Guardians.⁹⁹ By the beginning of November, both Boards had appointed Sanitary Committees which both promised to undertake 'vigorous operations', a move which met with the approval of the Health Committee.¹⁰⁰

2.5.3. THE OFFICIAL RESPONSE, 1849

The disease failed to manifest itself in the town in 1848 and concern waned until it spread again in the summer of 1849. Though there were occasional cholera scares, a mood of optimism prevailed in the town. This stemmed from the unprecedented amount of sanitary work being carried out by the local authorities. According to a local newspaper, whilst the public health in most large towns was deteriorating, it had 'materially increased' in Sheffield as a direct result of the strict sanitary regulations introduced the previous November.¹⁰¹ Significantly, cholera's retreat in the winter had not led to a relaxation of activities. In the eight months after the Sheffield Guardians announced their intention to enforce the N.R.D.P.A., they served over one thousand notices demanding removal of nuisances and summonsed over one hundred offenders to appear before the magistrates. Steps

were also taken to improve conditions in Sheffield's lodging houses, to clean dams and waterways and the owners of new property were 'induced' to pave and drain their streets.¹⁰²

Although ultimate legal responsibility lay with Sheffield's two Boards of Guardians, several other agencies were vested with public health powers.¹⁰³ Indeed, the complex structure of local government had already been identified as a potential obstacle to improvements. In their Sanitary Report of 1848, Haywood and Lee warned of the need for cleansing, paving, drainage and other sanitary arrangements to be placed under the control of a single public body.¹⁰⁴ Fears that the Guardians' cleansing and nuisance removal campaign would be hampered or obstructed by the other branches of local administration were unfounded. Indeed, the Health Committee, the Highway Boards and the Improvement Commissioners did their utmost to support and assist the two Boards of Guardians. The Health Committee resolved to use the powers accruing to it under local by-laws to help and the Improvement Commissioners pledged 'hearty co-operation' with the Guardians.¹⁰⁵

On the rare occasions when disputes or confusion did arise, they were resolved amicably.¹⁰⁶ The authorities' willingness to work together in an attempt to avert the epidemic won praise from various sources. Well before cholera arrived, the Sheffield Times confirmed that all the town's sanitary agencies had 'assiduously applied themselves to the work of sanitary improvements'.¹⁰⁷ The Governors of the

Sheffield Public Dispensary were similarly impressed, speaking of the pleasure they derived from 'the sanitary inspection which the town is now undergoing'.¹⁰⁸ The campaign also elicited the admiration of deputations from other towns. After conducting a brief survey of the town, two Inspectors from Liverpool announced that Sheffield was the cleanest town they had visited.¹⁰⁹

Steps were also taken to arrange a system of medical relief.¹¹⁰ Both the Sheffield and Ecclesall Bierlow Guardians sought advice and assistance from the Sheffield Medical Sanitary Association, which had been formed by local medical men early in 1848 to 'co-operate with ... the promotion of sanitary measures'.¹¹¹ Before discussing the proposed system with the Guardians, the Medical Sanitary Association consulted Dr Laurie who had organised Glasgow's medical arrangements when cholera broke out there late in 1848. Several of Laurie's ideas, along with those advocated by the G.B.H. were agreed to at a meeting held at the beginning of August.¹¹² Plans revolved around the early detection and treatment of diarrhoea cases. The Guardians decided that they would divide, (and if necessary sub-divide) each union district into separate medical areas, each of which would have its own Dispensary, medical officer, medical assistants and nurses. Both Sanitary Committees acquired and prepared premises for use as diarrhoea hospitals and houses of refuge. It was also agreed that in the event of cholera breaking out, every effort would be made to redouble sanitary cleansing operations in the appropriate locality. At this stage it was felt that a system

of house-to-house visitation would not be required.¹¹³ Steps were also taken to familiarise the public with the medical preventive system. Both newspapers published details of the scheme in August, and the two Boards of Guardians had printed thousands of handbills and posters explaining the various procedures to the public. To avoid alarm, the distribution of these was delayed pending cholera's arrival.

Shortly after the Guardians' preparations were completed, epidemic diarrhoea was diagnosed and three days later the first cholera cases appeared on 27 August.¹¹⁴ At once the planned medical measures were put into effect.¹¹⁵ Applicants reporting to dispensaries with premonitory symptoms were dosed with astringent medicine and given a supply to take home with them. If, as was often the case, they were applying on someone else's behalf, they were provided with medicine and instructed on its use. The name and address of each applicant or patient was taken and forwarded to the District Medical Officer who then visited each victim at home to check his or her condition. Further visits were made to reinforce the message that family and neighbours should seek early treatment for bowel complaints and to impress the need for sanitary and dietary vigilance. When the Medical Officer or one of his assistants discovered a case of cholera a different procedure was followed. If possible, the patient would be treated at home by one of the two town surgeons and his nurses. Other members of the family would be sent to the diarrhoea hospital or house of refuge, depending on their condition. A 'special visitor' was then sent into the infected locality to inspect

sanitary conditions and advise of further cases as they arose.¹¹⁶ Following the recovery or death of a cholera patient, a team of workmen was sent to his or her house to conduct thorough cleansing before other residents were permitted to return. Despite being relatively complex, the scheme proved to be workable and, in the opinion of many contemporaries, successful.

When the epidemic intensified in September, the *Guardians* decided it was necessary to distribute leaflets on a house-to-house basis. The newspapers repeated the advice and, in an attempt to discourage complacency, included several warnings of the likely outcome of failure to comply. Several deaths, stated the Sheffield Times, had occurred because people had allowed 'the pestilence to penetrate their very vitals before seeking the succour that is so safely vouchsafed to all'.¹¹⁷ Similarly, it was noted that the six cholera deaths which occurred in Attercliffe during the week ending 22 September, were all 'clearly traceable to an obstinate disregard of premonitory symptoms', as all the victims had 'been recommended to procure medicine but had refused'.¹¹⁸ Propaganda of this nature also accompanied newspaper warnings about the need for public cooperation with other aspects of medical preventive arrangements. To illustrate that failure to use the house of refuge was not only unwise but positively dangerous, a local newspaper informed its readers of how, following the death of a man in his home at the Nursery, the other three occupants, who refused to leave, subsequently developed cholera and died.¹¹⁹ By contrast, the public was

assured that compliance with official arrangements would be attended by the best possible results. Mr Lewis, a surgeon working at Attercliffe, noted how early application for treatment of diarrhoea had prevented many cases from 'running into the worst stage of the disease'.¹²⁰ In a similar vein, the public was informed that after the death of a man in Dunn Street, his wife was taken to the house of refuge and their children, both of whom had premonitory symptoms, were sent to the diarrhoea hospital at Millsands, whilst 'effectual measures' were taken to disinfect the family home.¹²¹ 'By this measure', it was asserted, 'the health of the wife was preserved, and the children quickly recovered'.

Whilst special emphasis was placed on the early treatment of diarrhoea, people were continually reminded that they could actually reduce the chances of developing premonitory diarrhoea by taking action to ensure that they did not predispose themselves to disease. On numerous occasions the Guardians, medical men and newspapers warned of the need for hygiene, moderate diet, cheerfulness and temperance. Typical of the advice issued on these matters was an address delivered by a local vicar to the people of Chapeltown in which it was declared that 'The cholera has four great friends, DIRT, DRUNKENNESS, SLOTHFULNESS and FEAR. It hath also four great enemies, PURE AIR, CLEANLINESS, SOBRIETY and COURAGE'.¹²² The vicar reiterated the advice issued by the G.B.H. and medical men that, 'a hard crust of bread and a glass of pure water will do you more good than bad meat, stale vegetables and unripe or overripe fruit'. Analysis of the incidence of

diarrhoea convinced medical men and other officials that over indulgence at weekends, and particularly excessive drinking, was responsible for the increased number of diarrhoea cases which occurred on Mondays and Tuesdays.¹²³

The Guardians' emphasis on medical preventive measures, and particularly their efforts to arrest diarrhoea, did not lead to a relaxation of sanitary cleansing operations. Despite the fact that there had been a concerted nuisance removal campaign since the previous November, and in some quarters Sheffield was considered to be a model of cleanliness, cholera's arrival saw the Guardians redouble their efforts. One such 'model' intervention was particularly noteworthy.

The news that premonitory diarrhoea was prevalent in Attercliffe and, more particularly, that cholera had claimed the lives of eight people, met with a speedy response. Vigorous cleansing and nuisance removal commenced on 15 September when, according to a local newspaper, Attercliffe was 'invaded ... by a cleansing army ... under the command of Mr Watkinson'.¹²⁴ The army's 'artillery' consisted of two fire engines, its 'infantry' of a 'regiment of whitewashers' and twenty eight firemen. Its purpose was to 'storm the strongholds of filth and infection' in the hope of making Attercliffe 'cleaner and sweeter than at any time within living memory'. Under the direction of Mr Watkinson, Clerk to the Sheffield Guardians, the firemen hosed down premises where cholera cases had occurred or which were considered dangerous

to the public health. Gangs of workmen were ordered to empty privies and middens, cleanse, disinfect and whitewash houses, and clean and disinfect yards, streets, drains and sewers. Simultaneously, the public was instructed or forced to remove a variety of nuisances ranging from bedclothes to pigs. The local press applauded what they considered to be the Guardians' prompt and comprehensive sanitary measures which had seen 'nuclei of filth ... carried off or entirely dispersed'.¹²⁵ Attercliffe's water supply was also felt to be a problem.¹²⁶ In an attempt to procure a cleaner and more abundant supply, the Council and the Guardians' Sanitary Committee wrote to the Water Company requesting it to furnish a supply for eight hours a day.¹²⁷ Within two weeks 'good pump water' was laid on so villagers no longer had to supplement their supply with filthy water from local sources.¹²⁸ Steps were also taken to stop the Canal Company from dredging the canal, a project which was thought to be adding to the insanitary atmosphere.¹²⁹ There was, as will be discussed later, another interpretation of this 'success' story.

As already shown, the incidence of cholera and mortality was relatively low. Whether this was due to sanitary and medical measures is difficult to say, though the low incidence undoubtedly enabled measures to be concentrated. Nonetheless, the local authorities, and the Guardians in particular, received lavish praise and were more than willing to accept that their actions had averted the kind of crisis experienced in the town in 1832 and elsewhere in 1849. Both local

newspapers praised the vigorous and comprehensive measures implemented by the Sheffield and Ecclesall Guardians.¹³⁰ Further local support and praise for the Guardians came from the Town Council. Isaac Ironside announced that under current arrangements the town was 'obtaining the benefits of the Public Health Act without the machinery of the Act itself'.¹³¹ The Guardian's response to the epidemic also won the rapid approval of the G.B.H., which expressed 'great satisfaction' with the arrangements at the beginning of September.¹³² Locally, medical men and Union officials were convinced that their system of prevention was working. Medical Officers in the Sheffield Union reported that prompt action with 1,582 cases of diarrhoea had led to only one of these patients dying.¹³³

News of this remarkable 'success' was quickly relayed to Poor Law Guardians in other towns by the G.B.H. and Dr Wilson Overend, Chairman of Sheffield Medical Sanitary Association, with the 'Sheffield Plan' soon being recommended to other local authorities. A communication from the G.B.H. informed the Guardians in Manchester that 'a thorough and efficient system of prevention' had been established in Sheffield and 'had been rewarded by an extraordinary exemption from fatalities from cholera, notwithstanding the existence of a large amount of diarrhoea and predisposition to the disease'.¹³⁴ Both the G.B.H. and the Manchester press urged the town's Guardians to adopt identical measures, with the latter pointing out that the 'Sheffield Plan' could be implemented 'without any additional large expenditure'.¹³⁵

Details of the 'Sheffield Plan' and reports of its success soon appeared in other newspapers, local and national. On the basis of evidence contained in a letter from Dr Overend, a Leeds newspaper announced that official medical arrangements in Sheffield were so effective that 'the poor and miserable' were better protected than the 'richer classes' who sought treatment from private practitioners.¹³⁶ The Times stated that Sheffield's 'remarkable success' was attributable to the Guardian's medical scheme which made it impossible for a case of cholera to escape notice.¹³⁷

Clearly, the perceived efficacy of preventive and medical measures in Sheffield was something of a boon for the beleaguered G.B.H. Ever since the N.R.D.P.A. had been brought into effect in the autumn of 1848, the Board's medical superintendents had been trying to persuade reluctant or sceptical local authorities to adopt its recommendations.¹³⁸ So far as the Board was concerned, the control of diarrhoea was paramount and could only be achieved thorough house-to-house visitation. The failure of many Boards of Guardians to instigate systems of visitation was considered to be particularly negligent.¹³⁹ Indeed, the only reservation the G.B.H. had about the Sheffield scheme was that it departed from their system of medical aid in that visitation ensued after application to one of the local dispensaries. In the opinion of Sutherland, this modified form of medical inspection did not constitute a rigid system of visitation, as the poor could not be trusted to apply for medical aid on their accord.¹⁴⁰ This mild reproach irritated one of

Sheffield's newspapers which saw it as carping about a model scheme.¹⁴¹

This criticism notwithstanding, Sutherland singled out several aspects of the 'Sheffield Plan' for praise. Firstly, he enthused over the way in which the Guardians worked closely with other public health agencies and the local medical profession prior to cholera's arrival. He also commended the way in which the scheme had been conceived after the Guardians and medical men had familiarised themselves with every piece of information on cholera, including the documents published by the Board and the 'results of experience elsewhere'.¹⁴² In this respect the Sheffield Guardians stood almost alone. A second feature was the way in which all of the principles of preventive medicine had been adopted. Elsewhere, local Boards made provision for either medical or sanitary precautions, in Sheffield both medical and sanitary measures had been implemented in a unified and complementary fashion. Consequently, Sutherland argued that the Guardians medical arrangements had nipped premonitory symptoms in the bud, whilst their sanitary operations attacked the disease at source, thus enabling the town's inhabitants to resist the epidemic influence.¹⁴³ A further feature of the Guardians' response was their willingness to implement preventive measures without regard to expense. Whilst cost led to raised eyebrows in certain circles, none of the town's authorities, medical men or newspapers appear to have given a second thought to the financial implications of averting or

containing the epidemic.¹⁴⁴

Overall, Sutherland described the Guardians' efforts as a 'perfect scheme', and argued that it was rewarded by a considerable saving of life. According to Sutherland's own data, of the 5,319 cases of diarrhoea which occurred in Sheffield, only 76 passed into cholera and only 46 cholera fatalities had occurred.¹⁴⁵ The low incidence of cholera relative to the high incidence of diarrhoea was regarded as incontrovertible proof of the success of medical relief. Moreover, according to Sutherland, the Guardians' longer term cleansing and nuisance removal programme had also been of great benefit as it had made a major contribution to the 'comparative immunity which Sheffield enjoyed from developed cholera'.¹⁴⁶

2.5.4 - 2.5.5. THE MIDDLE AND WORKING CLASSES.

It is worth recalling here that many historians share the view that mid-century Sheffield's social structure differed from that of other large manufacturing towns where pronounced class divisions existed.¹⁴⁷ For example, Reid argued that the process by which the culture of masters and men separated out into a class of merchants and manufacturers and 'a working class consisting of skilled and proletarian groupings' was extremely gradual prior to 1860.¹⁴⁸ Given that class divisions were still relatively indistinct in the late 1840s, this section will discuss middle and working class responses together. However, it is worth bearing in mind Reid's

qualification that tensions and conflicts 'could take place within and between classes'.¹⁴⁹

From an official point of view, prevention or containment of the epidemic was contingent on public co-operation with prescribed measures and regulations. Throughout the epidemic period a constant flow of official 'advice' in the form of newspaper articles, notices, posters and leaflets was given to the public. Because the labouring classes, who comprised the bulk of the population in Sheffield and other large industrial towns, were thought to be most vulnerable to cholera, requests for co-operation and compliance with official measures and directives were, implicitly or explicitly, addressed to them. Even though many preventive measures were interventionist, with disruption of family and community life, there is evidence of working class support for, and compliance with, such measures.

The supposed indifference of the poor to health was the principal reason for the G.B.H.'s insistence that Boards of Guardians should mount systems of house-to-house visitation. In Sheffield, however, medical men and Poor Law officials, all of whom had a 'thorough knowledge of the habits of the people', decided to trust the public to apply for treatment voluntarily.¹⁵⁰ Although the local press and Sutherland cited instances of people ignoring calls, medical men appear to have been satisfied by the public's response. Dr Overend reported that calls for voluntary application for medical aid were heeded.¹⁵¹ Dr Lewis, was more complimentary, stating

that the work of the Sanitary Committee had been 'much forwarded by the readiness evinced by all parties attacked in making applications to the medical officers and dispensaries'.¹⁵² Published data reveals that in the Sheffield Union district alone, there were over 6,000 voluntary applications for medical treatment.¹⁵³

The testimony of local medical men and the number of voluntary applications strongly imply that in Sheffield's case, the G.B.H.'s fears and Sutherland's complaints were unfounded. Also, it should be pointed out that Sutherland was somewhat hasty in construing failure to apply for official treatment as a shortcoming of the Guardians' system of medical prevention or, more especially, as evidence of working class apathy. People chose not to apply for a variety of reasons. Treatments and cures were available from a number of sources, other than the Guardians. Indeed, estimates supplied by a local newspaper, reveal that almost a fifth of the fatal cholera cases recorded in the Sheffield and Ecclesall Union districts had been under the care of private practitioners.¹⁵⁴ Moreover, as was the case in other towns and cities, a range of treatments and cures was available from the alternative sector.¹⁵⁵ Lastly, it is worth pointing out that some individuals chose not to seek medical treatment on religious grounds.¹⁵⁶

The public's apparent willingness to place its trust in the Guardian's medical arrangements was one sign of the vastly improved relationship which existed between Sheffield's

working class and local medical men. This point is further illustrated by examining working class attitudes to the most disruptive and potentially provocative element of the official system of relief; namely, their insistence on removing people from infected houses to either the house of refuge or the diarrhoea hospital.

Removal of cholera patients to hospital led to angry and often riotous popular reactions during the epidemic of 1831-32, primarily because it played on working class fears about the medical profession and dissection, not to mention the fact that the considerable disruption of family and community life added to the trauma of the epidemic.¹⁵⁷ In 1849, one Attercliffe woman complained that on the day of her husband's funeral, she, her daughter, son in law, and their four children were ordered to leave the family home.¹⁵⁸ Her daughter and grandchildren were sent to the house of refuge, whilst she and her son in-law were instructed to make their own arrangements until the house had been cleansed. Another person spoke of his resentment at having to obtain a ticket from Mr Watkinson before being allowed to collect his children from the house of refuge.¹⁵⁹

In these and similar cases, anger was not directed against the official medical procedures or Medical Officers as such, but at the insensitive way in which they were implemented by lay officials. Indeed, the poor appear to have recognised the need for extraordinary arrangements and to have been grateful to the town's medical fraternity for the way in

which it worked towards arresting the epidemic.¹⁶⁰ The inhabitants of Attercliffe joined with their local vicar in thanking official medical men for the 'most kind and exemplary way' in which they performed their duties throughout the epidemic period.¹⁶¹ Praise was also extended to the medical staff at the diarrhoea hospital and house of refuge. From the point of view of the medical authorities, the task of arresting the epidemic was much easier as a result of working class co-operation. The only complaint medical men voiced about the working class response was that 'the lower portion of the working classes' ignored repeated warnings about 'carousing and dissipation' at weekends.¹⁶²

Whereas opinion in Sheffield held that medical men had conducted themselves in a caring, sensitive and conscientious manner, there was widespread disquiet about the way in which official cleansing measures were carried out. People from a variety of social and occupational groups expressed anger about what they saw as the Guardians' over-zealous and misguided war against nuisances.¹⁶³ In the case of the 'attack' on nuisances in Attercliffe mentioned above, local people saw the cleansing team as behaving more like an army of occupation than a relief column.

Contrary to assurances that cleansing operations in Attercliffe would be concentrated on houses where cholera had been reported, the cleansing team made little attempt to discriminate between affected and unaffected properties.¹⁶⁴ Numerous complaints were also made about the way in which

nuisances were designated. In many instances, beds, bed clothes, clothing and other possessions considered by their owners to be clean, were deemed dangerous and confiscated or burnt. Similarly, a number of privies were demolished by workmen despite the fact that the night-soil was removed at regular intervals by their owners. An assortment of other items, ranging from building materials to water barrels which their owners maintained were inoffensive, were destroyed or removed.

Anger mounted because it was felt that official cleansing operations were often counter-productive, undoing much of the self-help precautionary work undertaken by the residents themselves. Shortly after official cleansing began, a number of people complained that their houses and yards, which had previously been well scrubbed, whitewashed, and disinfected with chloride of lime, were left filthy and unwholesome by the authorities. Further complaints were made about the haphazard or incomplete way in which work was carried out. One Attercliffe resident described how workmen sent to clean her privy:

'left the yard in a very dirty state. The walls still remain down, and the ashplace is exposed to view If the ashplace were a nuisance before, it is much worse now, the drainage from it flowing down the passage for want of a retaining wall'.¹⁶⁵

Many official sanitary measures were criticized for being 'unscientific'.¹⁶⁶ Having been bombarded with sanitary advice from official sources over the previous year, many people in

Attercliffe were astonished when officials and their staff undertook measures which seemed 'more likely to cause than check disease'.¹⁶⁷ People were incensed when, having ordered workmen to destroy a trough said to contain the only source of clean water available to many villagers, Watkinson instructed firemen to draw stagnant and filthy water from the canal and a pond for cleansing. Similar reservations were expressed when the contents of privies and middensteads were left to stand in the streets for several days. This procedure, it was felt, 'completely poisoned the atmosphere'.¹⁶⁸

Such fears were quickly borne out as within days of the cleansing team's departure new cases of premonitory diarrhoea and then cholera reappeared. One man recalled that after his property had been hosed down with water from the canal, he felt ill and began to vomit; another that one of his tenants died of cholera after cleansing operatives had hosed his house with 'bad' water taken from Whitworth's pond.¹⁶⁹ Similar complaints were made by other villagers, amongst them the Reverend Blackburn who stated that, 'After the fire engines came to the village, many deaths happened from cholera ... They occurred principally in the line where the fire engines had been'.¹⁷⁰

Given that many people in Sheffield believed that the actions of the cleansing team were actually helping to spread the disease, it is unsurprising that the team's presence in a particular area caused widespread fear and alarm. This situation was doubly worrying because as well as militating

against public co-operation with cleansing operations, medical opinion held that fear could predispose people to cholera. One woman was said to have died from cholera as a result of the 'terror occasioned by the watering brigade'.¹⁷¹ A similar case, in which a man died after he witnessed the authorities 'turning out a number of persons from their houses in anticipation of cholera', was reported in the Nursery district.¹⁷²

The conduct of officials, and especially Watkinson, was a source of particular anger and resentment. In his dealings with the general public he was said to have been strident, abusive and, on occasions, threatening.¹⁷³ Throughout the cleansing campaign Watkinson ignored protests and rebuffed suggestions that he or the Guardians should provide any form of compensation. In encounters with Attercliffe's wealthier and more 'respectable' inhabitants, Watkinson was more diplomatic but no less intransigent. The Reverend Blackburn's request that hosing should be suspended because it was damaging property and helping to spread cholera was firmly dismissed.

Insensitivity towards the bereaved, lack of respect for the dead and official interference with funeral arrangements caused additional bitterness. Although the immediate interment of victims was no longer official policy, representatives of the Guardians caused something of a furore by calling at the home of John Kerry, whose two children died of cholera, with orders that the deceased were to be

immediately 'fastened up' in coffins sent from the workhouse, and buried the following day.¹⁷⁴ Although the men allowed Kerry to find a female to lay out his daughter, they ignored his pleas that the children should be buried in coffins he had ordered from an undertaker. 'A great commotion' ensued in Attercliffe on the day of the funeral, as shocked villagers saw the hearse travel through the main street with both coffins 'projecting out of the windows'.¹⁷⁵ This was considered to be even less respectful than what was usual practice of carrying coffins to the Vestry Office in an open cart. The dignity of the funeral was further marred when Kerry discovered that his children were to be buried in the cholera ground and not in the plot of ground he had ordered. Religious beliefs were also affronted on the Day of Humiliation, for whilst calls for prayer were 'strictly observed' with public houses, shops and other businesses closed, Watkinson's cleansing team continued to work, even during the Divine service.¹⁷⁶

Many of the grievances held by the people of Attercliffe in 1849 were identical to those which led to conflict in towns and cities across Britain in 1831-32. Family life was disrupted, cleansing and nuisance removal were carried out arbitrarily, property and possessions were confiscated, damaged or stolen, the dead and bereaved were shown little respect, and, perhaps worst of all, it was widely believed that the cleansing team's attempts to arrest the epidemic were counter-productive. Yet, despite the anger and resentment public order was never seriously threatened; although

Watkinson had found it necessary to request an escort for the fire engines after they were followed by a 'great concourse' of angry people on their first working day in Attercliffe, and there were scenes of 'excitement' and 'commotion' during the following week, physical resistance did not materialise.¹⁷⁷ This is not to say that the people of Attercliffe were passive. Throughout the cleansing campaign and, indeed, afterwards protests continued.

These took two forms. When the sanitary operations were in progress, cleansing operatives and their supervisors were challenged directly by individuals, or indirectly through intermediaries, such as the Reverend Blackburn or Samuel Jackson.¹⁷⁸ Concern and protests about the sanitary operations did not diminish after the cleansing team departed. Indeed, at the beginning of October, local people made a formal protest through a petition. This resulted in the presentation to the Council of a memorial signed by over five hundred rate-payers calling for an enquiry into the sanitary proceedings at Attercliffe.¹⁷⁹ Public disquiet, coupled with the fact that several local dignitaries also expressed support, prompted the Council to bow to popular opinion and set up an enquiry. Evidence was heard from a large number of people, the vast majority of whom were highly critical of the cleansing team and of Watkinson's high-handed methods. The Guardians declined an invitation to give evidence, arguing that the memorial should have been forwarded to the G.B.H. or the Poor Law Board and pointing out that neither they nor their employees was answerable to the Council.¹⁸⁰

The view that the public's dilatoriness, ignorance and immorality were largely to blame for the insanitary conditions in which they lived was widely espoused in middle class circles and was a recurrent theme in general sanitary propaganda.¹⁸¹ In the late summer of 1849 it became apparent that sections of Sheffield's middle class subscribed to this view, blaming the poor for predisposing themselves to attack or even, in some cases, cholera's appearance in the town.¹⁸²

Of all the working class habits giving rise to concern in respectable circles, one - the practice of keeping animals, and especially pigs - was singled out for criticism. Nothing was more likely to produce filth and contribute to the likelihood of disease, wrote one citizen, than animals kept in heavily populated districts of the town by people 'who could barely afford to keep the human members of the family'.¹⁸³ In the fraught circumstances of September 1849, the Guardians believed it imperative that the pig problem should be addressed. Consequently, Watkinson and his team were instructed to remove this nuisance. In Attercliffe cleansing operatives made people move pigs away from houses, demolished styes, carted away manure, and, on many occasions Watkinson threatened to fine people without notice for keeping pigs in their yards.¹⁸⁴ These measures were enforced with equal rigour in other districts of Sheffield.¹⁸⁵

Working class people saw these nuisances very differently. To them, keeping a pig made sound economic

sense, because in addition to meat, pigs produced manure which could be sold. Also pigkeeping was perceived as a traditional 'right'. Whereas protests about other aspects of the cleansing campaign had been made in conjunction with wealthier rate-payers, working people acted independently on this matter. In mid-October placards were distributed, condemning seizures or threats of seizure 'under the pretence of the Nuisance Removal Act'.¹⁸⁶ Placarding was followed by a public meeting which was so well attended that hundreds of people were unable to gain entry. Those who attended condemned the Guardians in the strongest terms. Two factors, the infringement of customary rights and the Guardians' alleged disregard of legal technicalities were singled out for criticism.¹⁸⁷ Attempts were made to persuade those present to march to the Workhouse and demand the immediate return of confiscated animals, when this failed the meeting voted to pass a motion denouncing 'dictatorial authority' and requesting a meeting with the Guardians at which the matter could be discussed. The Guardians subsequently agreed and a compromise was worked out. It was decided that because the 'crisis' was over, no action would be taken against swine keepers unless a member of the public had made a complaint and, when this occurred, confiscation would only result after the correct legal procedures had been followed.¹⁸⁸

2.5.6. SANITARY REFORM AFTER 1849.

Sheffield's success in combating cholera is said to have taken the sting out of the sanitary question in the town.¹⁸⁹ Ostensibly, there is evidence to support this. Calls for immediate improvements and reforms were rarely heard during the epidemic, not least because people appear to have been satisfied with the way in which the authorities responded to the crisis. In the early 1850s a number of proposed improvements were shelved, most notably the joint Highway Board's drainage scheme.¹⁹⁰ Even more importantly perhaps, a move to obtain an Improvement Bill was thwarted by an alliance of hostile rate-payers and councillors in December 1851. On closer inspection, however, it becomes clear that these developments, and particularly the opposition to the Improvement Bill should not be equated with indifference or hostility towards sanitary improvements, rather they reflected disagreements about how these should be achieved. The key to the rejection of the Improvement Bill, and ultimately to the stagnation of improvements in the late 1850s, lay in the deep rooted suspicion of centralisation.

Ironically perhaps, the idea of applying for an Improvement Act was first mooted by the Council as an alternative to adopting the Public Health Act; the latter course of action being rejected because despite containing 'many excellent provisions' it required submission to the control of the G.B.H.¹⁹¹ The attractions of drafting and applying for an Improvement Act, which contained similar

Clauses and provisions to the Public Health Act but would not threaten local autonomy, seemed obvious. The Council's decision was welcomed by a local newspaper which made its feelings about centralisation abundantly clear, urging central government,

'[To] trust sanitary measures to the municipalities, giving them all reasonable powers and facilities free from the interference of Central Boards and they may rely upon satisfactory progress'.¹⁹²

Early in 1851 an Improvement Bill was drafted by, amongst others, Isaac Ironside. It was designed to give the Council responsibilities currently held by the Highway Board and Improvement Commission, the rights to purchase the town's gas and water companies and to standardise liability for local taxation.¹⁹³ Although the climate of opinion was still favourable to sanitary improvements it quickly became apparent that the Bill was less popular than supposed.

Whilst a local newspaper looked forward to 'the many advantages from the proposed Bill', this view was not shared by a number of councillors and a body of rate-payers.¹⁹⁴ The main objection was the way in which it was thought to threaten the system of local government nurtured by Ironside and his Chartist-Democrat colleagues. Ironside, upon whom the ideas of the anti-centralist propagandist Joshua Toulmin Smith had made a profound impression, believed that ordinary people should be actively involved in political decision making at the local level.¹⁹⁵ To achieve this he encouraged the creation of 'wardmotes' which Fraser described as 'a system of

ward and township democratic self government' resembling small local parliaments.¹⁹⁶ As Ironside intended, wardmotes, along with vestry and public meetings, became an established device by which rate-payers were able to influence the agenda and direction of local politics.¹⁹⁷ As well as centralising power with the Council, the Bill would have increased the power of the police and Church Burgesses. Worse still, the standardization of local taxation would place the burden of paying for improvements squarely upon working men, while at the same time the abolition of the popular Highway Boards would effectively disenfranchise them.

The matter came to a head towards the end of 1851 when Ironside, who it should be remembered had been a member of the drafting committee, persuaded his colleagues to postpone the application pending a public meeting. At the meeting, held in December, and attended mainly by working men, it emerged that rate-payers were not opposed to the principle of sanitary reform, but to pursuing it in a way which would lead to increased centralisation, higher rates and disenfranchisement.¹⁹⁸ In defence of the Bill, Dr Hall countered that the meeting should vote for application because implementation would reduce sickness, a condition which pressed 'so heavily on the working classes'. Hall's argument failed to make any impression, with the meeting voting to postpone the application by a huge majority.

The decision to reject the Bill was a cause of regret in various circles. The Independent, argued that Sheffield was

now 'deprived for an indefinite period of provisions of the highest importance to its health, cleanliness, and improvement'.¹⁹⁹ The Council expressed a similar sentiment, resolving that it 'deeply regrets that the Burgesses have thought it expedient to postpone ... the Improvement Bill which ... promised to be a measure of great and lasting benefit to the Borough'.²⁰⁰ The failure to obtain an Improvement Act left the structure of Sheffield's sanitary administration intact, with responsibility for sanitary duties still divided between a variety of agencies. As such, sanitation was still dependent upon close cooperation and goodwill between the different bodies; this had worked before and during the crisis of 1849; would it work in the future without the stimulus of cholera?

2.6. 1848-49 IN PERSPECTIVE

There were clear differences in the experience of the 1848-49 cholera epidemic between the towns which are the focus of this study. Differences have been shown at all levels, from mortality, through local authority responses to class experiences. However, the four towns can be seen to represent a continuum, with Hull at one pole - with the highest mortality, least active authorities and strained class relations - and Sheffield at the other - with very low mortality, a 'model' local authority and class consensus and co-operation. Leeds and Bradford offer intermediate positions on these variables. Although it makes for a certain degree of anachronism, the first two themes addressed here will make use of our modern understanding of cholera as a bacterial infection spread via the faecal-oral route in contaminated water, to speculate about the factors likely to have influenced mortality.

2.6.1. CHRONOLOGY, URBAN INFRASTRUCTURE AND MEDICAL MEASURES

Knowledge of cholera's cause and mode of transmission has led historians to dismiss the idea that the temporary preventive measures enacted in 1849 would have been effective, as no one specifically recommended boiling water and dealing hygienically with patients and their wastes. However, this presentism must be rejected. The impact, material and psychological, of cleansing campaigns cannot be ignored. Removing nuisances, using chloride of lime and general

cleaning (if carried out with uncontaminated water) could well have reduced the likelihood of infection. So too might individual actions resulting from general hygienic propaganda and the public's epidemic consciousness.

In attempting to explain the different levels of mortality in the four towns, and more especially, why Sheffield escaped so lightly, two variables now seem likely to have been most important: (i) seasonal and climatic factors and (ii) the water supply. It was recognised then, as now, that cholera thrived in warm, sultry weather. There was a closely observed link between the season or weather pattern prevailing at the time of cholera's arrival and levels of mortality. The epidemics in Leeds, Bradford and Hull began in July. This meant that the disease was able to establish itself and spread in the hot summer of 1849. In these towns it followed the classic pattern, spreading gradually and persistently over a period of weeks before entering the explosive phase in late August and September. The late arrival of cholera in Sheffield, at the end of August (perhaps due to luck and the fact that the town was not on a major trade route), meant that weather conditions were much less favourable. It is interesting to note the Sheffield epidemic ended, without entering the explosive phase, at the same time as those in the other three towns when early and severe frosts affected the region.²⁰¹

The knowledge that cholera is usually transmitted through water tainted by faeces containing cholera bacilli and that

serious epidemics occur when supplies of drinking water become contaminated, throws light on the fact that the epidemics in Leeds, Hull and Bradford claimed middle as well as working class lives. Concern over water quality and shortages in each town had produced improvements in mains provision in the 1840s. These very 'improvements' probably played a major part in the spread of the disease. By 1849 Hull drew water for domestic and industrial purposes from the River Hull which also acted as the town's main sewer. In the view of Gillett and MacMahon the town's dependence on river water was 'the sole cause of the 1849 epidemic'.²⁰² Piped water was available to the majority of people in Leeds in 1849. Indeed, between 1842 and 1852, the number of houses supplied with company water increased from 3,000 to 23,000.²⁰³ Improvements in the quantity of water, however, were not accompanied by improvements in quality.²⁰⁴ The lack of filtering, coupled with the dangers from fractured sewers or drains, means that contaminated mains water may have been circulating in Leeds in 1849. The situation in Bradford mirrored that in Leeds. The provision of mains water was extended throughout the 1840s and by 1849 approximately half the houses in Bradford had access.²⁰⁵ Those people who did not have piped water bought supplies from water carriers who resold piped company water. This goes some way to explaining why cholera affected areas like New Leeds which in 1849 were not connected to the mains supply.²⁰⁶

The situation in Sheffield was different because much of the mains water was drawn from springs on the uninhabited

hills to the west of the town and was reported to be of 'good quality'. Stand-pipes had replaced water carriers in most areas, although supplies were intermittent, especially in those areas inhabited by the poor.²⁰⁷ As such, many people had to store water and seek supplementary supplies from springs and other natural sources.²⁰⁸ Some local sources undoubtedly became contaminated as there were clusters of cases adjacent to waterways or where people drew supplies from ponds, yet well and spring water was less generally likely to be contaminated.²⁰⁹ Moreover, and of great significance, it was reported that many of the cholera cases which occurred amongst people who lived some way from the main waterways 'have been amongst people whose occupations led them to spend much time by the river'.²¹⁰ Other factors which were likely to have shaped the pattern of the epidemic locally were chance variables, such as, the number of infected people arriving in the town, where and how victims were nursed, and the fate of their wastes.

What would the impact of medical preventive measures and treatment have been? Again it is impossible to be definitive, but such measures should not be dismissed. Many contemporaries, while recognising that there was no specific cure, were convinced that victims could be helped significantly. It must be remembered that cholera had a case mortality of 30-40%, so the majority of sufferers always survived and hence many recoveries were associated with particular medical treatments. The practice of treating cholera patients at home while removing other members of the

household to either the houses of refuge or diarrhoea hospitals was an innovation in 1849 and, if a contaminated local water supply was the main source of infection then removal would have reduced the risk of infection. These actions would also have reduced the chances of people coming into contact with contaminated clothing, bedclothes or privies.²¹¹

There was a widespread belief that the early treatment of premonitory symptoms with astringent medicines played a vital part in preventing diarrhoea developing into advanced or Asiatic cholera. However, the proposition that astringents or any other medicines used were effective as a means of treating cholera has not been treated seriously by historians who have tended to reject all nineteenth century therapies as ineffective.²¹² Only Finer has taken astringent medicines seriously, but even he only suggests that this was because they induced constipation and prevented 'sufferers from using privies'.²¹³ However, it is now possible to go further. Once in the intestine the cholera bacillus reverses or inhibits the process by which water and salts pass from the gut into the blood stream, leading to the characteristic watery diarrhoea. This loss of body fluids leads to severe dehydration and this was, and still is, the main cause of death in cholera. Thus, anything which would have slowed bowel movement, like astringents, would have reduced fluid loss and dehydration. A common substance whose absorption is unaffected by the bacillus is glucose, so anyone with a high sugar of

carbohydrate diet would have been less debilitated and may explain the lower mortality of the middle class.

2.6.2 THE PUBLIC HEALTH ACT, 1848

Despite being rushed through Parliament, the Public Health Act, 1848, was of little assistance to local authorities wanting to take action to reduce the threat of cholera, and as events in Hull showed, it was of marginal assistance to local rate-payers. This was largely because the Act was designed to enable local authorities to undertake the long term sanitary improvements, not short term emergency measures. As far as countering the threat of cholera and other epidemics went, the single most important piece of legislation was undoubtedly the N.R.D.P.A. Historians have tended to overlook this Act, presumably because it did not signal major changes or advances in any aspect of public health sanitary policy. Be this as it may, the Act was of the utmost importance in 1848-49 because it provided the framework for immediate and ongoing preventive action at the local level. Two related features of the Act should be highlighted, the first being the way in which it involved Boards of Guardians in sanitary action, an area of work with which they are not normally associated. However, as Chadwick and others were quick to point out, the reason for placing the responsibility with the Guardians was straightforward. As elected representatives of the rate-payers, they more than the other branches of local government, had an interest in ensuring that the level of cholera mortality was kept to a

minimum. The second significant feature of the N.R.D.P.A. was, as we have seen, that it required local Boards of Guardians to implement a range of medical precautions. This is often overlooked by historians who, perhaps not surprisingly given the G.B.H.'s and particularly Chadwick's hostility towards curative medicine, have failed to recognise that great importance attached to medical measures during epidemics. The history of public health should not be seen solely through Chadwickian spectacles.

2.6.3 MIDDLE CLASS RESPONSES

When cholera returned in 1848-49 British society was no less polarised than in 1831-32. Consequently, cholera once again revealed class relationships and attitudes. As had been the case in 1831-32, a number of variables - including differences in past experience of epidemics, customs and conventions, available resources and expectations of each others behaviour - played important roles in shaping each classes' perceptions and responses. As such, the 'two nations model' has proved just as relevant to an understanding of social responses to the second epidemic as the first. In 1848-49, official preventive action was a middle class prerogative, involving those groups and individuals who either controlled the various branches of local administration, or had access to the necessary resources, or possessed the expertise required to contribute to public health activities.

The middle class response could be both passive or active. Either way, class structured expectations and identities. This is no where better seen than with regard to the medical profession, who some historians have put in a distinct middle class fraction because their social position did not depend upon wealth and because their professional orientation was towards service. Such views are presentist and represent a complete misunderstanding of the mid-nineteenth century profession. This was more of a status than expert profession, and status depended upon income, connections and influence. Medical men, both to survive and prosper, made enormous efforts to build up practices amongst the local plutocracy, to insinuate themselves into local elites, especially through work for voluntary welfare institutions, and to develop cultural institutions such as local medical societies. To the working class, medical men as a group were indistinguishable from employers and landlords; indeed, in many ways they were worse, making a living from the misfortune of others and only serving the very poor through the workhouse. Though this is not to deny that individual medical men, many of whom were economically, if not socially, close to the working class were looked upon differently. But only as individuals, not as a social group. In this sense class is problematic; however, even more so would be the dissolution of class into numerous fractions and interest groups.

There were significant, if not totally unexpected, continuities between the 1831-32 and 1848-49 cholera seasons.

However, there were notable differences in the official and wider middle class responses to the two epidemics and, more importantly, in the responses to the same epidemic in different places. These need to be highlighted and explained. One difference in the second epidemic was the type of preventive measures which local authorities implemented or were urged to implement. The switch to the miasmatic theory was such that many of the most intrusive precautions based on contagionism, which had been central to the system of prevention in 1831-32, were deemed unnecessary. However, the epidemic did prompt a revival of contagionism amongst medical men and the local authorities in Leeds.

Unlike the situation in 1831-32, fears that cholera would promote widespread social and political unrest do not appear to have played a part in shaping the official response in 1848-49 despite the relative strength of Chartism. Similarly, the experience of cholera in 1831-32, and of other epidemics in subsequent years, had shown that the poor were most likely to fall prey to the disease. This contributed to a sense of relative security amongst the middle classes, whilst simultaneously reinforcing their view that the poor were largely to blame for their own ill health and that official action was required to protect the poor from themselves as much as the disease. In the changed context of 1848-49, therefore, the arguments for and against the implementation of preventive measures were identical to those used to support or oppose the longer term objectives of the sanitary movement. Action could be justified on the basis of moral, philanthropic

or economic considerations and opposed by those who objected to expenditure which would benefit the 'undeserving' poor.²¹⁴ These factors were important in 1848-49 because the responsibility for preventive action at the local level was vested in existing agencies rather than especially created ones. This meant there was a less uniform response in 1848-49, because of the diversity of administrative arrangements and structures found in different towns. In turn, the character and actions of local agencies reflected the political power structures and social relations of each town.

This latter point is particularly important when considering the striking contrast between the official responses in Sheffield and Hull. In Sheffield the two Boards of Guardians, the Council and other sanitary agencies and local medical men worked closely together. Moreover, their efforts were generally supported by the all sections of the community. The contrast with Hull could not have been more stark. Here both sets of Guardians and the Town Council ignored repeated warnings about the need preventive action and displayed what was described as an 'utter indifference to the lives of the poor'. This attitude was not confined to local officials but was shared by some of the town's wealthier citizens and several vested interests. The main differences between the towns were not in administrative structures, but in class structures, class relations and political representation.

Medical men played a vital part in the fight against cholera. Acting as independent practitioners, employees of the Guardians or through their own organisations, they undertook a range of duties. These included providing advice to the Guardians and public, identifying nuisances, helping to plan the system of medical care, acting as visitors and, of course, treating the sick. Medical men had already turned their attention towards an analysis of local health problems, developed an environmental view of disease and were projecting themselves as fierce social critics. For Inkster this role was a device which medical men believed would help them overcome their social marginality.²¹⁵ Yet their concern about the health of the poor was genuine, not least because many had been born into artisan families and others came into close regular contact with the poor through religious and political activities and affiliations.

2.6.5 POPULAR RESPONSES

In 1831-32 the official preventive campaign was universally resented by all working class communities and actively resisted by many. This has been attributed to two factors: (i) the threat to working class subcultures posed by the assertion of the dominant middle class culture; and (ii) the preventive measures which played upon working class fears of the medical profession. In 1848-49, the official strategy of prevention was again highly interventionist, yet it did not provoke the same level of reaction. There are a number of reasons for this. Firstly, many of the preventive measures

which had caused resentment and fear in 1831-32 were not used again; for example, the immediate interment of the dead and quarantines. Second, working class fears of body snatching had diminished. This, along with other changes, had produced improved relationships between medical men and the poor. Thirdly, intervention was no longer novel. Between 1832 and 1848 public policy had developed in such a way that official intervention into several spheres of life was accepted, if not expected. With regard to sanitary and medical action in the West and East Ridings, it should be remembered that preventive campaigns had been mounted during the fever epidemics of 1846-47 and that these had been welcomed or tolerated by the working class. This last point is particularly interesting because it suggests that by 1848-49 the working class may actually have expected the local authorities to take action to avert the epidemic.

The above point must not, however, be pushed too far because working class people did not passively accept all preventive measures. Cooperation only materialised when the working classes approved of or agreed with specific preventive measures. In this context past experience of disease, beliefs in particular theories of disease causation, relationships with the authorities and notions of rights were crucial determinants of behaviour. Thus, whilst people might act on official instructions to modify their diet, seek immediate treatment for premonitory symptoms or carry out cleansing in and around their homes, compliance was not guaranteed. Where working class people or communities disapproved of official

measures there were two sorts of response. First, official recommendations and directives could be ignored. Second, action could be taken to stop or reverse the offending measure. This happened in Leeds where hundreds of people signed a petition demanding that the authorities should overturn to ban Mr Waterson from distributing his 'cholera powders' to the poor, and in Hull where the belief amongst the working class that cholera was contagious led to successful demands for the authorities to close the cholera hospital. Even in Sheffield, where there was a relatively high degree of class cooperation and consensus, working class people took determined steps to prevent what they believed was the unwarranted and unnecessary confiscation of animals, a measure which they believed infringed customary rights. A third course of action involved the working class taking precautionary steps which were consistent with their own understanding of disease and its relation to urban ecology. For example, people in Leeds believed that cholera was contagious and acted accordingly, shunning victims, their families and possessions. Likewise, the belief that tar burning had been successful method of prevention in 1832 prompted a revival of this practice and a belief in the efficacy of patent medicines prompted people to seek treatments from alternative practitioners. Other forms of response to the epidemic point to a popular understanding of the urban environment. This was certainly the case in Sheffield where there was widespread disquiet about a number of sanitary measures taken by the authorities because working

and middle class people alike believed these were counter-productive.

2.6.6. THE IMPACT OF THE 1848-49 EPIDEMIC ON SANITARY REFORM AT THE LOCAL LEVEL

Was the cholera epidemic of 1848-49 an immediate boon to local sanitary reform?²¹⁶ There are two general reasons for supposing that it might have been: firstly, it was far more destructive than the first epidemic and, secondly, the public health movement had already exercised considerable influence at national and local level. For reformers, the 'dread' cholera provided an ideal propaganda weapon for use in subsequent lobbying. The epidemic was certainly responsible for creating a climate of opinion which was favourable to reform and improvement in the three Yorkshire towns in which cholera was most destructive. That there appears to be a correlation between levels of mortality and subsequent sanitary progress is supported by the fact that major improvement schemes or administrative reforms did not materialise in Sheffield. As indicated above, however, what was at issue in Sheffield was not so much the desirability of sanitary improvements as the means of achieving them. That rate-payers voted to reject administrative reform reflected an unusual degree of confidence in the existing local authorities together with a wish to preserve rate-payer democracy. Public faith in the Highway Board was repaid in 1852 when it responded to rate-payers concerns about ill health by initiating work on a project to provide some of Sheffield's

most insanitary and disease-ridden districts with drains and sewers.²¹⁷

Cholera undoubtedly played a major part in facilitating the rationalisation of local government in Bradford and Hull. In both towns it was widely recognised that improvements would not materialise unless administrative reforms were made. However, although L.B.H.s were formed in both towns, there was no guarantee that the authorities would actually use the powers available to them. The situation in Leeds was different again, with the epidemic leading to the implementation of a specific improvement scheme rather than changes in sanitary administration. Whilst the implementation of the drainage project was interpreted as a mark of progress it was not necessarily symptomatic of a new found commitment to sanitary improvement on the part of Leeds Council.

In view of the fact that reform did not automatically lead to sanitary improvements, and specific measures might not translate into amelioration, there is clearly a question mark against any straightforward link between cholera and local sanitary reform. Also, to answer the question properly a longer perspective is needed. This can be obtained from investigating subsequent cholera epidemics.

FOOTNOTES FOR PART 2(B)

1. Bradford Corporation (BC), Minute Book, 2.10.1848.
2. Bradford Observer (BO), 14.6.1849.
3. Ibid, 18.7.1849 and 26.7.1849. Also see: BPP 1850 [1274] XXI, Report of the G.B.H. on the Epidemic Cholera of 1848 and 1849, p. 152, which holds that the epidemic started on June 8th, this accords with the verdict of the inquest.
4. BO, 26.7.1849.
5. Ibid, 26.7.1849.
6. Ibid. Also see M. Durey, The Return of the Plague: British society and the cholera 1831-1832, 1982, pp. 141-147.
7. BO, 23.8.1849.
8. Ibid, 6.9.1849.
9. Ibid, 11.10.1849.
10. E.C. Midwinter, Victorian Social Reform, 1968, p. 35 ; G. Firth 'The Bradford Trade in the 19th Century' in D.G. Wright and J.A. Jowitt, eds, Victorian Bradford, 1981
11. B Thompson, 'Public provision and private neglect', in Wright and Jowitt, *ibid*, p. 139
12. A. Elliott, The development of municipal government in Bradford, unpublished PhD thesis, University of Bradford, 1976.
13. Thompson op cit note 11 above and Elliott, *ibid*, p. 77.
14. D. Ashworth, 'The Treatment of Poverty' in Wright and Jowitt, op cit note 10 above, pp. 85-92. This part of the discussion is based on this article unless otherwise indicated.
15. Bradford Board of Guardians (BBG), Minutes 1837-1850, 3.11.1848.
16. Ibid, 29.9.1848.
17. Ibid, 6.10.1848; 17.11.1849.
18. Ibid, 17.11.1849.
19. Ibid, 6.10.1849. Also see: Ashworth, op cit note 14 above pp. 89-93. Ashworth argues that the method of paying Union medical men was a long-standing problem which had contributed to a rift between the representatives of the

Bradford Township and the outer townships. This led to reorganisation of the Union in 1848.

20. BBG, Sanitary Committee, 14.9.1849.
21. Bradford Corporation, Sanitary Committee (BC-SC), Minutes 1847-1860, 2.10.1848.
22. Ibid, 14.11.1849.
23. D. Fraser, Power and Authority in the Victorian City, 1979, p. 134. The by-laws passed in 1848 gave the Council the power to abate what Fraser described as 'minor nuisances'.
24. BO, 15.2.1849; and 1.2.1849.
25. BC-SC, Minutes, 21.12.1848. Also see: Thompson, op cit, note 11 above, p. 142.
26. Miasma, the meeting agreed, was the 'surest source of Typhus and other fevers', and cleansing, it was argued, would ensure that a 'very large share of pestilential vapours [would] be entirely prevented'. BBG, Minutes, 8.6.1849.
27. C. Richardson, The Management of Bradford's Public Health Environment since 1800, 1984, p. 6. This also gives details of the Local Board of Health's efforts to prevent cholera in 1832. Also see: BO, 1.2.1849. for the views of the Medical Officer.
28. BO, 1.2.1849.
29. BBG, Minutes, 8.6.1849.
30. BO, 26.7.1849.
31. BBG, Minutes, 23.7.1849.
32. LM, 28.7.1849. reports that offenders faced a #5 fine.
33. Bradford Corporation, Town Council (BC-TC), Minutes, 15.6.1849. Also LM, 21.7.1849.
34. BO, 26.7.1849.
35. LM, 28.7.1849.
36. BBG, Minutes, 10.8.1849. Also see BO, 9.8.1849.
37. BBG, Sanitary Committee, Minutes, 3.8.1849. Over 3,000 handbills were issued informing the public that this facility was available.
38. Ibid, 17.8.1849.

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39. BO, 23.8.1849.
 40. BBG, Sanitary Committee, Minutes, 17.8.1849; 24.8.1849.
 41. BO, 23.8.1849.
 42. Ibid, 2.8.1849.
 43. Ibid, 30.8.1849.
 44. Ibid. This advice came in a letter to the paper.
 45. Ibid. Also see: BBG, Minutes, 31.8.1849.
 46. Ibid. 30.8.1849.
 47. BBG, Sanitary Committee, Minutes, 31.8.1849. Steps were also taken to improve the coordination of nuisance removal.
 48. BO, 6.9.1849.
 49. Ibid, 13.9.1849; BBG, Minutes, 14.9.1849.
 50. BO, 13.9.1849.
 51. BBG, Sanitary Committee, Minutes, 14.9.1849.
 52. BO, 13.9.1849; BBG, Minutes, 14.9.1849.
 53. BC, Minute Book, 15.9.1849. for example, record that the Council received 'notices under the N.R.D.P.A.' signed by the inhabitants, stating that nuisances existed in various parts of the town. The Council passed the notice on for the attention its Sanitary Committee.
 54. Ibid.
 55. Ibid, 11.9.1849. Also see: BBG, Sanitary Committee, Minutes, 18.9.1849.
 56. BO, 11.10.1849; BBG, Minutes, 19.10.1849 & 2.11.1849. The Guardians dismissed the extra medical men on the 10th, and nurses and other attendants on the 19th. The only part of the preventive machinery to remain intact until November was the supply of free medicine to the poor.
 57. In the late 1840s Bradford had only one newspaper. Some information has been gleaned from the local authority records.
 58. BBG, Minutes, 29.9.1849. This measure was designed specifically to 'counteract the effect of cholera'.
 59. LM, 26.8.1849.
 60. BC, Minute Book, 15.6.1849; 24.8.1849.

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61. BO, 30.8.1849.
 62. Ibid.
 63. Ibid., BBG, Minutes, 9.10.1849. The Guardians sacked an employee who sold the beds of a victim to members of the public.
 64. BO, 30.8.1849.
 65. Ibid, 13.9.1849; BBG, Minutes, 10.10.1849.
 66. BBG, Minutes, 9.10.1849.
 67. BO, 5.9.1849; 20.9.1849. The last reports that almost 3,000 operatives went on trips during the previous week.
 68. R.J. Morris, Cholera, 1832, 1976, p. 319.
 69. Ibid, 4.10.1849.
 70. There is little evidence of what medical men thought, but the fact that the local newspaper did not publish any letters on pro-contagion letters suggests the majority were in agreement with the local authorities.
 71. BO, 2.8.1849.
 72. Ibid, 23.8.1849.
 73. Ibid, 2.8.1849.
 74. BO, 18.10.1849.
 75. Ibid, 2.8.1849. For the public see report of Council meeting, ibid, 26.6.1849. and letters in subsequent editions. Also see BBG, Minutes, 19.9.1849. Although the Guardians did not express support for the Act as such, they were in favour of the sort of improvements it would allow.
 76. Thompson, op cit, note 11 above, p. 140.
 77. BO, 28.6.1849.
 78. Thompson, op cit note 11 above, p. 140.
 79. BO, 7.3.1850.
 80. A. Elliott, 'Municipal government in Bradford in the mid-nineteenth century', in Fraser, op cit note 23 above, p. 117.
 81. Ibid.
 82. PRO, MH 13, Vol 28, Letters from Bradford to the G.B.H..

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83. Elliott, op cit, note 80 above, p. 118.
 84. Elliott, op cit note 12 above, Vol 2, pp. 133-160.
 85. Bradford Corporation Yearbook, 1851
 86. Bradford Corporation Yearbook, 1852.
 87. Sheffield and Rotherham Independent (SRI), 30.9.1848;
Sheffield Times (ST), 14.10.1848.
 88. Sutherland, op cit, note 3 above, p. 152.
 89. SRI, 28.7.1849.
 90. Sutherland, op cit, note 3 above, p. 121.
 91. ST, 1.9.1849.
 92. Ibid., 8.9.1849.
 93. Ibid, 15.9.1849; SRI, 15.9.1849.
 94. SRI 15.9.1849. to 6.10.1849.
 95. ST, 20.10.1849.
 96. SRI, 15.1.1849.
 97. S. Pollard, A History of Labour in Sheffield, 1959, p. 11.
 98. For example see: SRI, 30.9.1849; 14.10.1849; 4.11.1849.
 99. White's Directory of Sheffield, 1849, 1849, pp. 19-22. The Sheffield Union district comprised the Sheffield, Brightside, Attercliffe and Handsworth townships: the Ecclesall Bierlow district, the townships of Nether Hallam, Upper Hallam, Norton, Totley and Beauchief.
 100. SRI, 11.11.1848. Several Inspectors of Nuisances were appointed and a 'war of extermination against nuisances commenced'. Ibid, 18.11.1848. Reported that within days a substantial number of notices had been served requiring people to abate nuisances. Several had been prosecuted for failure to comply.
 101. ST, 11.8.1849.
 102. Ibid.
 103. Pollard, op cit, note 97 above, pp. 8-10. Also see: M. Walton, Sheffield: Its Story and Achievements, 1968, pp. 183-184. These were the Township Highway Boards whose duties included highway repairs and drainage; the Improvement Commission, which was responsible for lighting, cleansing, and street improvements within a three quarter of a mile radius of the parish church: and the Council's Health Committee which, under local bye-

laws, had limited powers to enforce a number of sanitary regulations.

104. J. Haywood and W. Lee, A Report on the Sanitary Condition of Sheffield, 1848, p. 110.
105. SRI, 16.6.1849. & 7.7.1849.
106. Ibid, 4.8.1849; 8.9.1849. Gives an example of a problem which was overcome. In August it emerged that there was uncertainty about which authority was responsible for cleaning undedicated streets in part of the Ecclesall Union district. Although the streets were within a three quarter mile radius of the church neither the Improvement Commission nor the Highway Board believed they were bound to carry out the work. After consultation between the various parties, it was agreed that the Improvement Commission should undertake the work, but that the cost should be met by the Guardians.
107. ST, 11.8.1849.
108. Sheffield Public Dispensary, 17th Annual Report, 1849, p. 1.
109. SRI, 8.9.1849; cf. ST, 15.9.1849.
110. In Sheffield and elsewhere, the authorities, medical men and the public were kept up to date with official ideas on medical preventive measures through notices and articles in newspapers and through correspondence with the G.B.H. and Poor Law Board. A steady stream of correspondence flowed between the PLB and the Sheffield Guardians concerning the possible occurrence of cholera at the Workhouse. See for example, Poor Law Correspondence, February 1849, in which the Guardians were instructed to pay particular attention to inmates diets and sanitary conditions at the Workhouse.
111. J. Furness, Fifty Years of Municipal Records, 1843-93, 1893, p. 87.
112. ST, 11.8.1849. The meeting between the Guardians and Medical Sanitary Association was held on 2 August 1849.
113. Ibid.
114. Sutherland, op cit, note 3 above, p. 121.
115. The following is based on accounts of the Sheffield Guardian's response to the epidemic; according to numerous sources, the Ecclesall Guardians implemented an identical measures. See for example, SRI, 1.9.1849; cf. Sutherland, op cit, note 3 above, pp. 109-111. The Sheffield Union was divided into seven medical districts, each of which was placed under the control of a qualified Medical Officer who was responsible for overseeing medical relief. As the Guardians had planned,

dispensaries where the poor could receive free medicines and treatment at any time of day or night were opened immediately. District dispensaries were placed in the houses of mechanics. At the same time, the diarrhoea hospital and House of Refuge were opened to receive either diarrhoea patients or healthy persons residing with cholera patients. The public was reminded of these arrangements by posters displayed on walls, in shops, manufactories and beer houses. Separate provision was made for treatment of paupers in the workhouse.

116. Sutherland, op cit note 3 above, p. 110.
117. ST, 22.9.1849.
118. Ibid.
119. Ibid.
120. Ibid, 15.9.1849.
121. SRI, 15.9.1849.
122. ST, 15.9.1849.
123. SRI, 24.9.1849.
124. Ibid, 15.9.1849.
125. ST, 23.9.1849.
126. SRI, 15.9.1849. The Town Council was concerned about the village's water supply. Because the supply of Company Water to Attercliffe was deficient, villagers were tempted (or forced) to obtain water from alternative sources such as wells, brooks, the river and the canal, several of which were seriously polluted. This was a long-standing problem and was thought to have been responsible for the fever deaths which had occurred in Attercliffe during the previous winter as well as the current diarrhoea and cholera epidemic. Also see: H. Jackson, 'Precautions Against Cholera', Journal of the National Association for the Promotion of Social Science, 1865, 413-415. In 1865 Jackson recommended the adoption of the Sheffield Plan of 1849.
127. Furness, op cit, note 111 above, p. 91.
128. SRI, 29.9.1849. Letter from Watkinson.
129. Furness, op cit, note 111 above, p. 357. Cf. ST, 23.9.1849. Which states that extraordinary cleansing activities were also undertaken in other parts of the Borough affected by cholera. When cholera established itself in the Nursery, similar measures to those seen in Attercliffe were implemented. Indeed, it was reported that in Pear Street 'a pile of buildings - a perfect concentration of every physical abomination - have been

entirely cleaned, and the same course is to be pursued with all similar dwellings'. This work was said to have involved 'a great amount of labour'.

130. SRI, 1.9.1849.
131. Ibid, 8.9.1849; 15.9.1849. Ironside was implacably opposed to the Act and was probably using the Guardians' efforts for propaganda purposes.
132. ST, 8.9.1849.
133. Ibid.
134. Manchester Guardian, 15.9.1849.
135. Ibid 15.9.1849; 26.9.1849. Following a visit by Dr Sutherland in September, the Manchester Guardians implemented a preventive system which incorporated the main features of the so called 'Sheffield Plan'.
136. Leeds Times, 15.9.1849.
137. Times, 11.9.1849.
138. S.E. Finer, The Life and Times of Edwin Chadwick, 1952, pp. 336-337.
139. Manchester Guardian, 15.9.1849.
140. Sutherland, op cit, note 3 above, p. 111; SRI, 29.9.1849. Also see: PRO MH 12 15470. In which the G.B.H. states in a letter to the Poor Law Board that the devices of leafleting and dispensary referrals used to trace diarrhoea cases by the Sheffield Guardians were 'useful as auxiliaries to house to house visitation' but should not be used as a substitute for it.
141. SRI, 29.9.1849.
142. Sutherland, op cit, note 3 above, p. 108.
143. Ibid.
144. Sheffield Local Register, (SLR) 13.4.1850. States that the Sheffield Guardians' cholera expenses amounted to £2,900 and Ecclesall Guardians to 'about' £600. Also see, Manchester Guardian, 15.9.1849. Which was critical of the Manchester Guardians, arguing that shortcomings in the official system of prevention was due to financial considerations. This, it claimed, contrasted to the situation in Sheffield where pecuniary matters had not been important.
145. Sutherland, op cit, note 3 above, p. 107. These figures do not correspond with those in other sources. SLR, 13.4.1849, for example, stated that there were 7,294 cases of cholera and diarrhoea and 65 deaths. Regardless

of which figures are used, case mortality was extremely low.

146. Sutherland, op cit note 3 above, p. 111.
147. J. Symonds, Report on the Trades of Sheffield and the Moral and Physical Conditions of the Young Persons Employed in Them, 1843, p. 3. Also see: D. Smith, Conflict and Compromise: Class Formation in English Society 1830-1914, 1982, p. 32.
148. C. Reid, Middle Class Values and Working Class Culture in Nineteenth Century Sheffield, Unpublished PhD thesis, University of Sheffield, 1976, p. 27.
149. Ibid, pp. 39-40.
150. Sutherland, op cit, note 3 above, p. 108.
151. Manchester Guardian, 15.9.1849.
152. ST, 15.9.1849.
153. Details of daily applications for treatment at the dispensaries were given in SRI, 23 August-13 October. In all 6,535 people were said to have applied.
154. SRI, 1.9.1849 - 20.10.1849.
155. I. Inkster, Studies in the social history of science during the industrial revolution, Unpublished PhD dissertation, University of Sheffield, 1977.
156. SRI, 22.9.1849.
157. Durey, op cit note 6 above, pp. 205-10. Also see: F.K. Donnelly, 'The Destruction of the Sheffield School of Anatomy in 1835: a popular response to class legislation', Transactions of the Hunter Archaeological Society 10, 1971-1977, pp. 167-173.
158. Report of the Committee appointed by the Town Council to enquire into Sanatory Proceedings at Attercliffe, 1849
159. Ibid, p. 8.
160. Sutherland, op cit, note 3 above, p. 110; ST, 15.9.1849.
161. Ibid, p. 4.
162. SRI, 29.9.1849.
163. As noted in the text, newspaper reports of the cleansing operations at Attercliffe were studded with military metaphors. Attercliffe, it was, stated was 'invaded' by a 'cleansing army': even the fireman's attire was likened to 'military costume'. SRI, 15.9.1849.

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164. Report, op cit, note 158 above, pp. 4-8. Several people complained that even though cholera had not been present in their homes, yards or courts, this did not prevent the cleansing team and firemen from hosing down their and adjoining properties.
165. Ibid, p. 7.
166. Ibid, p. 4.
167. Ibid.
168. Ibid.
169. Ibid, p. 6.
170. Ibid, pp. 4-5.
171. SRI, 6.10.1849.
172. Ibid, 13.10.1849.
173. Report, op cit, note 158 above, p. 5.
174. Ibid, p. 6.
175. Ibid, p. 7.
176. Ibid, p. 3.
177. Ibid.
178. Ibid; ST, 14.10.1849. The latter had filled a variety of public office, including that of Surveyor of Highways and Town Councillor.
179. SLR, 10.10.1849.
180. Report, op cit, note 158 above, p. 1.
181. F. Mort, Dangerous Sexualities, 1988, pp. 30-62.
182. Report, op cit, note 158 above, pp. 6-7. The actions and attitude of the cleansing team became explicable in the light of Watkinson's belief that the poor were directly responsible for the Attercliffe outbreak. They were, he said, 'a nuisance and filthy with a dirt'. Members of the team expressed similar views.
183. ST, 22.9.1849.
184. Report, op cit, note 158 above, p. 3.
185. SRI, 27.10.1849.
186. Ibid.

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187. Several speakers pointed out that no action had been taken against wealthier people who kept livestock. There was much anger over the Guardians failure to follow the correct legal procedures. Under the N.R.D.P.A., swine could not be confiscated until proof had been given to two magistrates that the animals constituted a nuisance and were injurious to health. Watkinson, as we have seen, did not comply with this rule.
188. SRI, 27.10.1849.
189. Pollard, op cit, note 97 above, p. 11.
190. Ibid.
191. SRI, 12.7.1851. This was the view of the Council Committee appointed to examine ways in which the Council could extend its sanitary powers and bring about lasting improvements.
192. Ibid, 2.8.1851.
193. Fraser, op cit, note 23 above, p. 140-142.
194. SRI, 16.8.1849. Also See: V. Thornes, Chartists and Reformers In Sheffield 1846-1878: Their Impact on Municipal Politics, 1981, pp. 7-9.
195. J. Salt, 'Experiments in Anarchism, 1850-1854', Transactions of the Hunter Archaeological Society, 10, 1971-1977, pp. 44-45.
196. Fraser, op cit, note 23 above, p. 141.
197. Ibid, p. 143. Also see: Thornes, op cit, note 194 above.
198. SRI, 6.12.1851.
199. Salt, op cit, note 195 above.
200. Sheffield Council, Minutes, 10.12.1851.
201. ST, 22.9.1849.
202. H. Cooper, The Borough of Hull considered in relation to the Health of its Inhabitants, 1849, p. 20. E. Gillett and K. MacMahon, A History of Hull, 1980, p. 263.
203. D. Fraser, 'The Politics of Leeds Water', Publications of the Thoresby Society', 53, 1973, p. 50.
204. C.J. Morgan, 'Demographic change, 1771-1911', in D. Fraser, ed., A History of Modern Leeds, 1980, pp. 65-66.
205. Thompson, op cit, note 11 above, p. 142. Where it is said that by 1852, 68% of houses in Bradford were connected to the mains supply.

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206. BO, 30.8.1849.
207. BPP, 1845, [602] XVIII, Second Report of the Commissioners on the state of large towns and populous districts, pp. 107-110. This Report states that, 'The better classes have water carried into their houses but the lower classes are supplied chiefly by standcocks'. Also see Haywood and Lee, op cit, note 104 above, passim. For example, it was stated that in 1848 areas had the supply only turned on for two hours a day, twice weekly. This, they argued, was a serious problem for the humbler classes who were forced to store water in insanitary conditions or seek it from alternative sources..
208. Ibid.
209. It should be remembered that in Attercliffe the spread of the disease was blamed on the authorities decision to use foul water from the canal for cleansing purposes.
210. SRI, 29.9.1849.
211. Finer, op cit, note 138 above, p. 342. Also see: I. Inkster, 'Marginal Men: Aspects of the Social Role of the Medical Community in Sheffield 1790-1850', in J.H. Woodward and D.N. Richards, eds, Health Care and Popular Medicine in Nineteenth Century England, 1977, p. 159. In a footnote Inkster argues that the low level of cholera mortality was 'Undoubtedly the result of improved cleansing and increased consultation with medical men'.
212. N. Howard-Jones, 'Cholera therapy in the nineteenth century', Journal of Medical History, 28, 1972, 373-95.
213. Finer, op cit, note 138 above, p. 342.
214. HA, 20.7.1849. For the Chadwickian argument that money spent on preventive measures would ensure that pauperism and poor rates were kept to a minimum.
215. Inkster, op cit note 211 above.
216. W.W. Spink, Infectious Diseases: Prevention and Treatment in the Nineteenth and Twentieth Centuries, 1978, p. 164. For a similar view see: F.F. Cartwright, A Social History of Medicine, 1977, p. 113.
217. Sheffield Highway Board, Annual Report for 1853, issued 27.4.1854.

3.1 INTRODUCTION.

In 1853 cholera returned. Cases were reported in the late summer of 1853, mostly amongst passengers and crew from ships which had sailed from the infected ports of north eastern Europe. Sporadic cases were reported on board ships docked at Hull in August 1853, but the General Board of Health (G.B.H.) did not officially acknowledge the disease's presence until it was diagnosed amongst the local population of Newcastle-upon-Tyne in mid-September.¹

Initially, the 1853-54 epidemic followed a similar chronological and geographical pattern to those of its two predecessors. It first established itself in epidemic form at an east coast port in the autumn and then spread into hinterland towns before being checked by cold weather only to re-emerge in spring the following year. In contrast to the two earlier epidemics, however, cholera did not continue to spread to any great extent in the summer of 1854. Indeed, for the most part, its ravages were confined to particular towns and the larger seaports, most notably, Liverpool and London. Mortality levels in these towns were as high as ever, but on a national level cholera claimed far fewer lives than in 1831-32 or 1848-49. According to the Registrar General, the epidemic was responsible for 20,000 deaths in England, and 6,000 in Wales, less than half the total claimed in 1848-49.² In Yorkshire, cholera's impact on mortality was minor. It claimed 81 lives in Leeds, 34 in Bradford and just 27 in Hull.

Sheffield fared worse, a brief autumn visitation caused 141 deaths, more than in 1849.

TABLE 3.1.

DISTRICTS OF HIGHEST CHOLERA MORTALITY 1854

District	Deaths per 10,000 popn.
Milton	91
Towcester	67
Thanet	65
Merthyr Tidfyl	59
Wisbech	49
Gravesend	49
London	43
Cardiff	42
Liverpool and West Derby	30
Bradford	1.8*
Hull	3.0*
Leeds	4.6*
Sheffield	8.1*
National average	11.0

* Based on estimates of population from 1861 Census data.
 Source: Report on the Cholera Epidemic of 1866 in England,
Suppl. to 29th Annual Report of the Registrar-General of
Births, Deaths and Marriages in England. 1868

The vast difference in mortality was not the only factor which distinguished the 1848-49 and 1853-54 cholera seasons in Yorkshire. During the former epidemic the official response to the crisis varied greatly at the local level, in 1853-54 there was much greater uniformity in thought and action. More specifically, the local authorities in Leeds, Hull and Bradford modelled their action on the much vaunted 'Sheffield Plan'. Unlike 1848-49 when the majority of preventive measures were taken belatedly and often half heartedly, in 1853 and 1854 every effort was made to prepare for the

epidemic before it began and to remain vigilant until the threat subsided. Account was also taken of the need for complementary sanitary and medical precautions, and co-operation between different sanitary agencies and local medical men. In effect, the 1853-54 epidemic met with the sort of official response at local level the which G.B.H. had wanted so desperately to see in 1849. The greater symmetry allows this epidemic to be discussed more thematically, though the experience of each town is again considered within each section.

3.2 PREPARATIONS - 1853

Within days of cholera being diagnosed at Newcastle, an Order in Council was issued giving the G.B.H. the task of overseeing the implementation of the Nuisance Removal and Disease Prevention Act (N.R.D.P.A.).³ The Board responded immediately, publishing and distributing its 'Directions and Regulations' to all local authorities.⁴ The precautions suggested by the Board were broadly the same as in 1848-49: local authorities were advised to mount an attack on nuisances and to prepare a system of medical relief based primarily on catching cholera in its incipient or premonitory stage. As had been the case in 1848-49, the public was instructed to avoid any form of behaviour which would predispose them to the disease, to exercise sanitary vigilance, and to seek immediate treatment for bowel complaints.⁵

3.2.1 Hull

Nowhere was the response to the threat of cholera more vigorous or urgent than in Hull. In the two years since its inauguration the Local Board of Health (L.B.H.) had, despite considerable hostility and opposition, begun to address the town's public health problems. Although there were occasional complaints from some of the town's most committed sanitary reformers about the slow pace of progress, the Board was acknowledged to have done a great deal of valuable work.⁶ When cholera threatened in the late summer of 1853, the Board's speedy response won it further praise.

The port's vulnerability to ship borne infections was illustrated by the arrival in the Humber of several German vessels carrying suspected cholera cases in the August and September 1853.⁷ Initially, priority was given to checking the condition of immigrants and seamen arriving at the port. Local medical men questioned ships' captains about the health of passengers and crew members and about living conditions on vessels before allowing disembarkation.⁸ Simultaneously, a rigorous system of inspecting Boarding Houses, especially those used by European immigrants, was put into operation.⁹ Whilst the possibility that cholera might be contagious does not appear to have been discussed explicitly, this type of precaution clearly demonstrated that the authorities believed that there was at least a strong possibility of transmission by human agency. As far as the G.B.H. was concerned, the inspection of lodging houses was desirable, only for

surveillance reasons, not those cited by local officials. In a letter the G.B.H. stressed that,

'this measure should precede all others, being the only one by which a real and full knowledge of the state of unhealthy parts of the district (in which these houses are generally situated) can be maintained from day to day ... without exciting alarm'.¹⁰

The L.B.H.'s precautionary activities were not confined to checking immigrants, seamen and lodging houses. By the middle of September further steps had been taken. The Board and the Guardians had agreed to execute the N.R.D.P.A. together and had made arrangements for adopting a system of house-to-house visitation.¹¹ On the sanitary front, routine nuisance removal operations were stepped up: chloride of lime was applied to drains, quicklime was poured into sewers, houses and courtyards were disinfected and whitewashed, and thousands of handbills containing advice for the poor and details of local by-laws were printed and distributed throughout the borough.¹² In the short term, the authorities' response helped to create a sense of security amongst local people. Indeed, it was claimed subsequently that cholera had not found a resting place in Hull that autumn because the efforts of the L.B.H. had ensured that 'the rotten ditches, open drains and heaps of foul putridity essential to the diffusion of cholera had, to a great extent, disappeared'.¹³ Two local medical men, Drs Ayre and Cooper, both of whom were ardent proponents of sanitary reform, undertook a sanitary audit of the town and issued a joint statement expressing their satisfaction with the

precautions and reassured the public that Hull was 'quite healthy'.¹⁴

Despite favourable reports about sanitary conditions and the response of the L.B.H., the threat of cholera in 1853 became subsumed into the cut and thrust of local politics. Cholera's arrival coincided with the promotion of an Improvement Bill in Hull, the intention of which was to extend significantly the powers and duties of the L.B.H. Although the Bill contained Clauses which would allow the Board to introduce stringent building and planning regulations, establish a municipal cemetery and update local Acts relating to sewerage, lighting and compulsory purchase, its primary objective was to provide the Board with the means to finance its work through borrowing by means of bonds and debentures.¹⁵ Needless to say, the borrowing Clauses were condemned by 'economists' and viewed with suspicion by many rate-payers. The Bill was also unpopular with some working class people because it sought to end rate exemption on certain properties. As a result, opposition to the Bill was widespread, coming from an unlikely combination of rate-payers' associations, the Cemetery Company, night-soil contractors, builders, landlords, and the working class. Even the progressive Hull Advertiser recognised that the implications of the Bill were worrying. 'Many worthy people', an editorial stated, 'have been frightened into the terrors of civic bankruptcy [by the prospect] of seeing works undertaken on a scale to be permanently useful'.¹⁶ Predictably, the proposed Improvement

Bill became the central issue on which the municipal elections of November 1853 were fought.

The renewed threat of cholera provided a timely fillip for the Bill's proposers and supporters. Repeatedly they stressed that cholera had not established itself that autumn because of the sanitary work undertaken by the L.B.H. since its formation in 1851. This was significant because many of the people who were trying to block the Improvement Bill had also opposed the formation of the L.B.H. Had they been successful, argued an editorial in the Hull Advertiser, the town would now be 'in as deplorable a state as [cholera stricken] Newcastle'.¹⁷ As well as attributing the absence of cholera to the Board's recent work, Hull's sanitary lobby also argued that the L.B.H.'s hand needed to be strengthened further. The message to voters was unequivocal, to oppose the Bill was to invite cholera.¹⁸

In the event, the elections were a victory for the town's sanitary reformers who, despite continued and fierce resistance from 'the muck interest', pressed ahead, with their efforts finally rewarded in July 1854 when the Bill received Royal Assent.¹⁹ Although Parliament did amend or strike out some of the Bill's more controversial Clauses, its passage still represented a potential major step forward for the L.B.H..²⁰

3.2.2 Bradford

Letters published by the local press reveal that cholera's arrival in Britain in 1853 was viewed with concern by the public in Bradford because sanitary conditions were not thought to have improved since 1849. Some of the Guardians continued to blame Irish immigrants for this, claiming that their homes 'were almost sure to invite the epidemic'.²¹ However, the local sanitary lobby took a different view, holding that neglect by the Council was responsible for the proliferation of nuisances. Consequently it was warned of the need for 'immediate and very effective measures to prevent [cholera's] appearance in the Borough'.²²

The threat, combined with public criticism, acted as a potent stimulus to the Council. In mid-September, the Mayor convened a meeting of Councillors, Guardians, medical men and other 'leading citizens' at which existing sanitary problems and the possibility of a new epidemic were discussed.²³ The meeting decided that immediate action was necessary and votes were taken in favour of: (i) instituting an official enquiry into sanitary conditions; (ii) arranging for the Sanitary Committee and Guardians to form a 'Committee of Co-operation' which was to be informed of all cases of diarrhoea and cholera reported in the town; (iii) dividing the town into separate medical districts; and (iv) stepping up nuisance removal and sanitary cleansing operations. The need for improvements was evident to the Guardians, yet already some Councillors were complaining about the extra costs.²⁴

By the beginning of October, precautions were under way with each of the medical districts inspected by two medical men whose brief was to identify and report nuisances.²⁵ The Council and Guardians agreed to work together to implement the N.R.D.P.A., and initiated cleansing operations throughout the town. Additionally, the Council elected to increase payments to its night-soil contractors to ensure that excrement was no longer allowed to accumulate in yards, courts and streets.²⁶ At the end of the month, the Council revealed that in just five weeks, its Sanitary Committee, acting with the Board of Guardians, had whitewashed over 1,000 filthy houses, cleaned 156 passages and courts, and emptied and whitewashed 300 privies. Moreover, upwards of 300 'similar forms of nuisances' were said to be in the process of removal.²⁷

This response did not fully appease the Council's critics. Indeed, it had been predicted in a local paper that the threat of cholera would promote an uncharacteristically vigorous response from the normally 'lackadaisical' Council, marked by 'important meetings' and temporary measures, only for this to subside when the threat of cholera diminished.²⁸ Members of the working class voiced more immediate concerns, complaining that if they reported nuisances in or around their homes they ran the risk of being evicted by their landlords.²⁹

3.2.3 Leeds.

In Leeds, news of cholera's approach led to calls for the formation of a joint Sanitary Committee, comprising Guardians and Councillors, to implement the N.R.D.P.A..³⁰ The

Guardians, however, had already acted, forming their own Sanitary Committee which was to 'exercise and perform all the powers ... devolving upon [the] Board under ... the Nuisance Removal and Disease Prevention Act of 1848'.³¹ Although a joint Committee was not established, the Guardians did agree to co-operate with the Council to abate nuisances.³² Local medical men advised the Guardians on the best mode of medical relief; with the exception of printing and distributing Dr Chalice's 'Plain Directions for Poor People on How to Avoid Cholera', it was decided that medical precautions, such as house-to-house visitation, should not be undertaken unless diarrhoea became prevalent.³³ The actions of the local authorities to 'ward off the great evil' won the praise of the local press.³⁴ Interestingly, the doubts which emerged in the town over the miasmatic theory during the 1849 epidemic appeared to have been forgotten. The advice of local medical men tacitly endorsed the accepted doctrine and actions that as, 'Filth is the food of cholera, it becomes communities to take measures, through their public authorities or otherwise, for the removal of all known sources of disease'.³⁵

3.2.4 Sheffield

Ironically, Sheffield was the only town where preparations and planning for the new epidemic threat did not go smoothly. The town's four main sanitary agencies, the two Boards of Guardians of the Sheffield and Ecclesall Unions, the Council and the Highway Board, along with the Medical Sanitary Association, met in September to discuss 'the best means of promoting the health and cleanliness of the Borough'.³⁶ Those

measures thought to have contributed to success in 1848-49 were discussed, however, action did not follow immediately due to a dispute between the Guardians and the Council's Health Committee over who was legally responsible for nuisance removal.³⁷ The Guardians mistakenly insisted that the Health Committee was responsible and although the Health Committee repeatedly pointed out that this was erroneous, the matter was not satisfactorily resolved for some months.³⁸

Nonetheless a number of factors made for an optimistic assessment.³⁹ Firstly, it was suggested that the recent revival in trade meant that people of 'low, depressing, regimen' were no longer common and hence the population would be less vulnerable to epidemic influences.⁴⁰ Secondly, an inspection of the town by a leading surgeon, Mr Parker, revealed that public health was unusually good.⁴¹ Finally, it was felt that repeating the success of 1848-49 would not be too difficult, so long as the public co-operated with any measures the authorities or medical men adopted, and especially those designed to arrest premonitory symptoms.⁴²

Such optimism, however, was not shared by everyone. Dr Hall, a highly respected member of the local medical community, expressed disquiet about the official response to the epidemic both in Sheffield and nationally. He argued that it would lead only to temporary, palliative measures and that these would be futile. 'All this has proved worse than useless before', he stated, 'and worse than useless it will prove again'.⁴³ Hall, like other sanitary reformers, believed that

cholera and other urban diseases could only be prevented by large scale, long term sanitary engineering projects. This view was backed by the Sheffield and Rotherham Independent (S.R.I.) and the Sheffield Times.⁴⁴

3.3 THE EPIDEMIC - 1854

3.3.1 Leeds

The first recorded outbreak of cholera in England in 1854 occurred in Leeds on 21 February amongst operatives at Wilkinson's Flax Mill.⁴⁵ By the second week of March there had been approximately forty cases and fifteen deaths. Although those affected by the disease lived in different parts of the town, it was stressed that all the cases were traceable to this one Mill.⁴⁶ Later in the month and throughout April the disease affected people who were unconnected with Wilkinson's and the portents did not look good. However, cholera did not become established and an epidemic was not designated. In fact, by the beginning of May, the town was reported to be free of the disease.⁴⁷ A number of false alarms occurred during the late summer cholera season following reports of imported cases, but again there was no epidemic.⁴⁸ According to the Registrar General, cholera caused 48 deaths in Leeds itself in 1854 and a further 33 in the out townships of Kirkstall, Hunslet, Holbeck and Bramley.⁴⁹ Compared with the number of deaths which occurred during the 1849 epidemic, and even to diarrhoea in 1854 (228

in Leeds and 168 in the out townships), these totals were small.

The vigorous sanitary cleansing and nuisance removal started in the previous year was stepped up further once cholera was actually diagnosed. Within days the town was in the grip of what is best described as a 'sanitary panic' as the Guardians, Council, local medical men and senior officials from the G.B.H. became involved in a frantic effort to prevent its spread. Expert opinions were immediately sought as to the most likely sources of the danger, the best sanitary measures to take and on the provision of medical aid for the sick and vulnerable.

Attention focussed on Wilkinson's Mill and the Guardians' Sanitary Committee instructed its Medical Officers to conduct an inspection in the hope of identifying localized causes, only this they failed to do.⁵⁰ Indeed, they seem to have been impressed by standard of sanitary and working conditions at the Mill and reported that, over a period of years, the owner had taken 'every precaution which intelligence and humanity could suggest ... to promote the health and comfort of the operatives'.⁵¹ Another sanitary inspection, instituted by the Mayor and carried out by two local medical men, also failed to identify causes, though it did point to a sizeable manure depot on the opposite bank of the river as a possible source.⁵² In the view of the Guardians, neither their own, nor the Mayor's investigation had produced conclusive

evidence, consequently they contacted the G.B.H. in London and asked for assistance.⁵³

The G.B.H. responded by sending one of its Medical Superintendents, Dr Henry Gavin.⁵⁴ On his arrival, Gavin inspected the stricken Mill and sanitary conditions in some of the most unhealthy districts. At a public meeting, he informed the authorities that the Mill's owners were not to blame for the outbreak, rather that several localized causes probably were. Amongst the most likely, Gavin argued, were: (i) the foul state of the River Aire and other waterways near the Mill, (ii) the location of the Council's manure depot, (iii) uncovered sewers and (iv) a host of other sanitary 'nuisances' which either individually or together 'gave off poisonous and destructive emanations'.⁵⁵ As was typical of sanitary thinking, Gavin pointed to a number of possible causes, rather than a single sufficient one. Another superintendent, William Lee, made a follow up investigation and, like Gavin, conceded that there was nothing exceptional about the outbreak of cholera as 'localizing causes [were] abundant and sufficient'.⁵⁶ Lee did not take issue with Gavin or the local medical men who had cited the miasmatic influences of the river and manure depot as possible causes, but he was critical of the owner of the Mill. Lee suggested that the Mill's ventilation and supply of drinking water were deficient. The latter, he argued, was likely to have a purgative effect on the Mill's one and a half thousand strong work force and was thus a likely pre-disposing cause. Lee reserved his strongest criticism for the Mill's drainage

system, which merely discharged raw sewage into an already badly polluted river. This, he asserted, was a particularly dangerous practice as water was pumped from the river straight back into the Mill and used unfiltered in manufacturing processes.⁵⁷ In a letter to the press, the millowner refuted Lee's allegations, pointing out that he had taken numerous steps to promote the 'health, comfort and convenience' of his employees. Most notably, he had spent over £1,000 on the installation of water closets, perhaps the very amenity that helped to circulate the disease.

The four official surveys were just one part of the cholera inspired sanitary activity seen in Leeds in the spring of 1854. Whilst various officials were still pontificating over the cause of the outbreak, the local authorities, and particularly the Guardians, were taking steps to prevent further spread. Their first and most dramatic precaution involved the closure of Wilkinson's Mill for a week so that the premises could be thoroughly cleansed.⁵⁸ By any standards this was a highly interventionist and possibly courageous measure, the wisdom of which was questioned by a writer in the Lancet who, thinking of poor diet as a predisposing cause, believed it would 'add to the calamity for the many hundreds of operatives employed there'.⁵⁹

By the time the Mill had been cleansed, the conclusions of the four investigations were known. Consequently, attention shifted from the Mill itself to other localised causes, most notably the manure depot on the opposite bank of

the River Aire. Because the Council owned and ran the facility, the responsibility for removing and cleansing it fell to its own, appropriately named, Nuisances Committee.⁶⁰ In the middle of March work on its removal began.⁶¹ This was followed by a decision to close the depot permanently and relocate it at Brotherton some twenty miles downstream.⁶²

Whilst the Guardians and the Council were jointly responsible for cleansing and nuisance removal operations, the Guardians clearly took the lead. By the time the Council suggested forming a joint Sanitary Committee towards the end of March, the Guardians' Sanitary Committee had been meeting daily for over two weeks, a fact which persuaded the Guardians that formal co-operation with the Council was unnecessary.⁶³ As was normally the case when the N.R.D.P.A. was in force, the provision of medical relief for the poor was the sole responsibility of the Guardians.⁶⁴ Nonetheless they continued to conduct sanitary cleansing and nuisance removal operations in other parts of the town.⁶⁵ In particular, energies were channelled into removing the 'swine colony' from the courts and alleys to the east of Briggate. As well as carrying out work themselves, the Guardians, along with the press and local medical men, pointed out that it was imperative that members of the public should assume responsibility for conditions in and around the home.⁶⁶ To force this message home, the Sanitary Committee issued thousands of notices which explained the need for personal and domestic hygiene.⁶⁷ Practical assistance for the poor was also provided by the Guardians in

the form of unlimited supplies of chloride of lime for disinfection and whitewashing.

Failure to comply with the various provisions of the N.R.D.P.A. was viewed seriously and legal proceedings were taken against offenders.⁶⁸ When diarrhoea and cholera began to appear amongst people unconnected with the Mill, the Guardians showed that they were more than ready to use the magistrates' courts as a device for compulsion. Proceedings had been taken against 320 people who had failed to remove nuisances by the middle of April.⁶⁹ Of this total, 264 were removed following court hearings, whilst the remainder were either awaiting removal or the magistrates' decision.⁷⁰

Even though the town surgeons pronounced, at the beginning of March, that public health was generally very good, and the authorities were stressing that all the cases which had occurred were connected to Wilkinson's Mill, the Sanitary Committee clearly feared that the situation might deteriorate.⁷¹ Consequently, they took steps to ensure that if individuals did develop symptoms, the disease could be treated in its premonitory stage. In the autumn of 1853 the Guardians and local medical men had discussed how this would be achieved and the agreed measures were duly implemented. Arguably the most important was the opening of twenty four hour dispensaries, where the poor could receive free medical aid and treatment for diarrhoea.⁷² It was also decided that the three townships and union districts of Leeds, Hunslet and Holbeck should form one medical district under the

superintendence of a temporary Medical Officer.⁷³ George Wilson, senior Medical Officer at the Infirmary, was appointed to this post and an unspecified number of people were also employed to assist with nursing and sanitary duties. The whole system of medical care was, as the G.B.H. had urged, designed to catch and treat the early or premonitory stages and thus concentrated on the home treatment of patients. Because cholera was not generally prevalent, the Guardians did not provide hospital facilities or a house of recovery.

Cholera had completely disappeared by the beginning of May and the incidence of diarrhoea was no longer a source of undue concern. This prompted the Guardians to discontinue their medical services, though both they and the Council remained 'on alert'. The Council, for example, took the unusual step of voting to add a further £500 to the Nuisance Committee's budget so that the Committee could maintain its increased workload.⁷⁴ Throughout the summer months the local newspapers monitored cholera's progress throughout the country and urged the public to remain watchful.⁷⁵ Although the Guardians terminated most aspects of their system of medical relief in May, they continued to enforce the N.R.D.P.A. and instructed all the town's medical men to attend all cases of diarrhoea promptly and to defray the cost of treatment.⁷⁶

Cholera's appearance in Leeds and, more especially, the consequent redoubling of cleansing operations, saw scrutiny of sanitary arrangements intensify. A L.B.H. had still to be

instituted, hence co-operation, formal or otherwise, between the various agencies contrasted with normal administrative arrangements. The Council's energetic response to the crisis was said to be at odds with the paltry amount of sanitary work it did under normal circumstances.⁷⁷ It was suggested also that the Council and its Nuisances Committee had wasted valuable time prior to the outbreak, and had ignored the old adage that 'prevention is better than cure'. Dr Gavin of the G.B.H. was no less critical, pointing out that not only had the Council neglected the implementation of both long and short term improvements, but it was also responsible for creating some of the most dangerous nuisances in Leeds.⁷⁸

3.3.2. Bradford

Although the Registrar-General stated that 34 cholera deaths occurred in Bradford in 1854, local evidence suggests that the number was lower. In most instances confusion and controversy surrounded deaths, for example, in mid-August the Bradford Observer informed its readers that it had received details of two deaths, yet had subsequently been informed that in both cases cholera had not in fact been the cause.⁷⁹ Precisely when or where the deaths recorded by the Registrar General occurred is uncertain because at no time in 1854 did the local press report cases or deaths as part of an ongoing outbreak. The only estimate of cholera mortality came at the end of October when it was reported that the disease had claimed a total of 11 lives that year.⁸⁰ Nevertheless, with cholera stalking the country, the traditional late summer diarrhoea season was perceived and acted on as much more than

an accepted annual hazard. Diarrhoea was automatically equated with the premonitory stage of cholera and its presence spurred the local authorities into implementing a number of measures.⁸¹

The Council, as the L.B.H., distributed thousands of handbills reminding the public of the needs for hygiene and avoidance of behaviour or diet likely to predispose to the disease. They also invited the Guardians to cooperate with preventive measures.⁸² As was the case elsewhere, medical measures were designed to prevent diarrhoea or premonitory symptoms developing further. With this objective in mind, all Bradford's Guardians were empowered to authorise poor people with diarrhoea to secure the prompt attendance of union Medical Officers and to obtain free medicines.⁸³ In addition the Guardians' Sanitary Committee adopted a limited form of house-to-house visiting. Union Medical Officers made daily calls to areas inhabited by the poor, where they provided the usual advice on personal and domestic hygiene, diet and the need for immediate treatment of bowel complaints. They also used visiting as an opportunity to identify nuisances and report them to the Guardians' Sanitary Committee, who then relayed the information to the Council's Sanitary Committee.⁸⁴ There is no record of the Guardians opening a house of refuge or diarrhoea hospital, but then there was no call for either.

Although the medical precautions were not implemented until the start of the diarrhoea season, the sanitary work started in 1853 was sustained in 1854. Throughout the year

the Sanitary Committee had been busily engaged in identifying a wide range of nuisances including blocked drains, foul privies and pig styes.⁸⁵ In addition to persuading landlords and tenants to remove hundreds of nuisances, the Committee's own cleansing team was unusually active. At the end of the year the Sanitary Committee of Bradford L.B.H. was able to report that 'work on the suppression of nuisances has progressed steadily during the year, more especially as the Committee has never lost sight of the probability that cholera might visit again'. This indicates that the authorities had heeded the warning in the Observer in August 1854, which said that even though cholera was not present in Bradford itself, 'everyone should behave as if it is'.⁸⁶

TABLE 3.2. NUISANCE REMOVAL AND CLEANSING WORK OF THE BRADFORD COUNCIL SANITARY COMMITTEE, 1853-56.

Activity.	1853-54	1854-55	1855-56
Drains cleansed.	250	225	202
Nuisances removed on notice.	248	23	0
Pig styes removed.	88	8	0
Houses whitewashed.	93	0	0

Source: Bradford Council Sanitary Committee, Minutes, 1853-56

The reappearance of cholera was another opportunity for reformers to criticise local authorities for their alleged neglect of sanitary improvements. Critics also predicted that

epidemic-inspired actions would be short-lived, declining as the threat of an epidemic passed. In the event, such forecasts were accurate as shown in TABLE 3.2. The decline in sanitary activity after 1854 led to further criticism of the Council. As will be discussed later, reservations were not just expressed about the amount of work undertaken, but also about which groups were benefiting from it.

3.3.3. Hull

In several respects the situation in Hull in 1853-1854 mirrored that in Bradford. After a frantic burst of sanitary activity in the autumn of 1853, the L.B.H. remained active, continuing to remove nuisances and monitoring the health of the town. Although an outbreak of cholera at nearby Cleethorpes and the subsequent appearance of imported cases in the late summer of 1854 put the authorities on alert, few medical measures were adopted. The only cholera scare prior to August 1854 originated in the most unlikely of places when the Swedish authorities asked the G.B.H. about the extent to which Hull and the other Humber ports were 'infected with cholera'.⁸⁷

The next cholera scare was taken far more seriously. At the end of August the local Registrar wrote to the Sanitary Committee informing it that Mary Wolfitt, 'a gentlewoman of North Street' had died of cholera shortly after returning from Cleethorpes.⁸⁸ Alarmed by this, the Sanitary Committee, acting in conjunction with the local Guardians, took immediate action, appointing a committee to ensure that details of local

by-laws and the G.B.H.'s warnings should be posted at every street corner and in every shop.⁸⁹ Specific measures, such as the division of the town into separate medical districts for the purpose of visitation were discussed, though at this stage considered unnecessary. Amongst the reasons for this were that the Sanitary Committee were still undertaking the inspection of ships, their crews and lodging houses and that operations begun in 1853 had not been relaxed.⁹⁰ The move from quarantines to inspection was a significant one. It showed growing medical confidence in the ability to recognise the disease, and the influence of anticontagionism and contingent contagionism. This latter position was also demonstrated by the Chairman of the Sanitary Committee and several other local medical men when, having completed a survey of sanitary conditions, confidently concluded that the town had 'never been healthier than at present'.⁹¹

In mid-September a further scare occurred following the publication of a letter in the Times from Dr Ayre asserting that cholera was present in the town.⁹² Other local medical men took issue, arguing that only a handful of imported cases and several cases of aggravated diarrhoea had occurred and that true cholera had yet to establish itself. Ayre's letter and his desire to issue a notice to the effect that cholera was present were, they argued, 'calculated to cause alarm' which would predispose people to attack.⁹³ It is clear from the response to cholera in 1854 that contemporaries perceived imported cases differently from local ones. Imported cases were undoubtedly seen as less of a threat than local ones, as

they did not indicate that the cholera poison was present in the atmosphere. In other words, the disease was regarded as safer in individuals than communities or the environment. Mortality levels in 1853-54 could not have contrasted more sharply with those in the 1848-49 and contemporary observers correlated this with the much higher levels of cleansing and monitoring. In other words, that sanitary measures had worked.

3.3.4. Sheffield

Of the four towns examined by this study, Sheffield was the only one where the incidence of cholera was greater in 1854 than in 1849. Isolated or doubtful cases were reported early in 1854, with the first case of the epidemic proper at the beginning of September 1854, almost five years to the day after the previous outbreak.⁹⁴ Again, therefore, the disease arrived towards the end of the 'cholera season'. Unlike 1849, when it was uncertain how the disease reached Sheffield, in 1854 there was absolutely no doubt over the origin of the epidemic: it was imported by holiday makers and daytrippers returning from the east coast resort of Cleethorpes.

Cholera's appearance in Cleethorpes at the end of August brought the traditional late summer holiday season to an abrupt end as panic broke out amongst visitors desperate to escape the stricken resort.⁹⁵ Of the nine hundred or so Sheffielders reported to have been in Cleethorpes when cholera broke out, just two succumbed to the disease while still on holiday.⁹⁶ The first case in Sheffield itself was that of the

keeper of Brunswick Chapel, who developed symptoms on arrival home.⁹⁷ Within days further cases were reported amongst other visitors. The disease spread fairly swiftly with cases in Attercliffe, Darnall, the Ponds and the Park.⁹⁸ It was believed that the incidence of the disease was heightened by the prevalence of diarrhoea in the town. At the end of September the epidemic typically began to wane, with a marked abatement in the incidence of new cases followed by a gradual decrease in the number of fatalities.⁹⁹ According to the Registrar General's figures, the 1854 cholera epidemic claimed the lives of 126 people in the Sheffield Union, and a further 15 in Ecclesall Bierlow.

As noted above, preparations, which had begun in the autumn of 1853, were soured by the dispute between the Guardians and Council. However, this did not prevent nuisance removal operations being stepped up or plans being drawn up for the provision of medical aid; indeed, throughout the first eight months of 1854, the local authorities remained active, using the powers available to them to undertake short and some longer term improvements.¹⁰⁰ Mindful that 'the dreadful scourge' was once again threatening, the Highway Board argued that temporary or palliative measures would be ineffectual unless augmented by lasting improvements; consequently, it resolved to pursue its drainage scheme with greater vigour than in previous years.¹⁰¹

When cholera arrived the Health Committee claimed that the Sheffield and Ecclesall Guardians, along with the Highway

Board, were 'taking effective measures to prevent the generation and spread of contagious diseases'.¹⁰² Elsewhere, serious reservations were expressed and several experienced medical men were reported to have 'great apprehensions ... of a very severe attack'.¹⁰³ Such pessimistic opinions were not intended as criticisms of the Guardians or Highway Board, they were based on the belief that, despite repeated warnings about diet and personal and domestic hygiene, many poor and working people were in a state predisposing them to the disease. Another worrying factor was a prolonged drought which had reduced water levels in local rivers to such an extent that many were already serious nuisances; the Sheffield Times stated that, 'They are little better than deposits of putrescent filth'.¹⁰⁴

As had been case in 1849, the amount of preventive action intensified when cholera arrived.¹⁰⁵ The Board of Guardians, the Health Committee, and Highway Boards formed a joint Sanitary Committee, yet whilst nuisance removal and cleansing operations went ahead, the authorities were unable to implement them with the same vigour or on the same scale as in 1849.¹⁰⁶ This was not due to official complacency or inertia, but to the effects of the drought. During the former epidemic fire engines had been used extensively to hose down stricken or vulnerable houses, courts and streets. In 1854 the scarcity of water made this impossible.¹⁰⁷ The shortage of clean water was so severe that the public were advised that supplementary supplies for whatever purpose should be drawn from wells rather than Sheffield's sewage contaminated rivers

and streams.¹⁰⁸ Clearly, the authorities regarded the rivers and river water as major nuisances, with a 'high medical authority' warning that visiting neighbourhoods close to some of Sheffield's waterways was 'sufficient of itself to cause cholera'.¹⁰⁹ The drought and resulting shortage of water worsened throughout September and by the middle of October had become so critical that the Water Company was forced to limit the supply to just one day a week.¹¹⁰ The effect of the water shortage is uncertain. It may have been a blessing in disguise, because had the authorities or the public used sewage polluted water for cleansing operations the risk of further spreading cholera would have increased markedly.

Whereas the drought put a brake on sanitary cleansing and nuisance removal operations, the Guardians were able to implement their chosen system of medical relief.¹¹¹ As before, the authorities concentrated their efforts on catching cholera in its incipient and supposedly treatable stage and, failing this, to institute the home treatment and care of cholera patients. Several twenty four hour dispensaries were opened where medical men could be consulted and supply of medicine obtained without charge.¹¹² The poor were informed of this facility and the Guardian's decision to provide free chloride of lime for disinfection, through the distribution of handbills and display of posters.¹¹³ Given that cholera's arrival coincided with the traditional diarrhoea season (and a particularly bad one at that, producing 334 deaths), it was perhaps predictable that the poor would make full use of the dispensaries. Whilst there are no systematic records of the

total number of people who applied for free medical aid, the fact that 355 cases of diarrhoea were treated at the public dispensary alone during the first fortnight of September, suggests that the poor responded to the provision of free medical aid.¹¹⁴

Reviving the precedent set in 1849, the Sanitary Committee appointed a number of house-to-house visitors to check on the progress of diarrhoea cases, to provide further medicines if necessary, and advise on matters of diet, hygiene and domestic cleanliness. That just three people were appointed suggests that, as had been the case in 1849, visitation was only adopted on a limited scale and targeted at those people and areas believed to be most at risk.¹¹⁵

When visitors, medical men or the public reported cases of advanced cholera, the Sanitary Committee again followed tried and tested procedures. Without exception, cholera patients were treated at home by a specially recruited team of female nurses.¹¹⁶ So that healthy people could escape epidemic influences, the Sanitary Committee re-opened premises in Rock Street as a house of refuge.¹¹⁷

There was little criticism of the authorities' immediate response to the epidemic. However, there was an undercurrent of opinion about the likely temporary nature of the response. Fears that cooperation between the various sanitary agencies and the increased level of sanitary activity would cease when cholera disappeared proved to be well founded. As soon as the

epidemic ended the joint Sanitary Committee was dissolved and sanitary duties reverted to the different agencies, with the Guardians again trying to shift the responsibility for executing the N.R.D.P.A. to the Council.¹¹⁸ Although they failed, there is no evidence to show that they had used the Act to effect improvements of any description. For its part, the Council reacted to the passing of the epidemic by promptly voting to reduce the size of the Health Committee 'on account of its duties being so light'.¹¹⁹

3.4. MIDDLE CLASS AND THE MEDICAL PROFESSION.

The official response to cholera in the four towns in 1853-54 was undoubtedly marked by much greater uniformity in thought and action than in 1848-49. Another significant difference was the absence of wider middle class action, official or philanthropic, or of individual initiative. This can be explained in part by the low incidence of cholera in 1853-54. This was certainly a factor in Hull where the response in 1853-54 was similar to that seen in Sheffield in 1848-49. However, this was for different reasons and certainly cannot be explained by any change in class relations. Rather it is best understood in terms of changes within the middle class whereby 'reformers' now enjoyed greater power. This was due to the impact of the earlier epidemic on several levels. Firstly it accelerated the adoption of the N.R.D.P.A., the formation of a L.B.H. and the passage of an Improvement Act. Secondly, the reputation of

the port and trade had suffered; thus, the provision of a few nuisance removal carts and general cleansing now seemed a relatively small price to pay to avoid another 'catastrophe'. Lastly, the psychological impact of the earlier epidemic should not be forgotten. In a matter of months one in every two hundred people had been lost, it was an experience the town's rulers did not want repeated.

Across all four towns the most significant factor in producing a more uniform response was the growing institutionalisation of public health at the local level. This, and the recent experience of an epidemic, created the expectation that local authorities should, could and would act. A further change was the growing involvement and influence of medical men in sanitary measures, which at the local level was ahead of what was happening in Whitehall. Indeed, the medical profession became the chief middle class ideologues in matters of health and disease, so it is on this group that this section concentrates.

When cholera first appeared in Britain in 1831, medical men had little knowledge of its cause or how it spread and even less about how to cure it. Twenty years on matters had changed. Most medical men now agreed that cholera was a specific disease, yet there remained differences at all levels of the profession, from the London hierarchy down to the provincial practitioner, about its cause, mode of propagation and particularly its treatment. This was confirmed in a Lancet editorial in 1853 which noted:

All is darkness and confusion, vague theory and vague speculation ... What is cholera? Is it a fungus, an insect a miasma, an electrical disturbance, a deficiency of ozone, a morbid off scouring from the intestinal canal? We know nothing, we are at sea in a whirlpool of conjecture'.¹²⁰

Observations about these uncertainties were not confined to the medical press. In the industrial towns of the West Riding there was a widespread awareness that the medical profession had yet to make a significant breakthrough in its understanding of the disease. In a blunt editorial in September 1854, the S.R.I. informed its readers that:

'There is no disputing, our medical authorities are no more sure than they were when cholera first appeared on our shores. They have settled upon no theory, but only that all theories are false: they confess their inability, or at least they are split into parties, each denouncing the others as accelerating the patients death'.¹²¹

However, in 1853-54, there were fewer of the old exchanges between miasmatisms and contagionists.¹²² At a time when Snow argued that 'the commercial interest and influence preponderates over every other', few medical men were willing to declare themselves outright contagionists.¹²³ The contagionist position was undoubtedly weakened because of its associated quarantine system. By the 1850s, contagionism's unpopularity amongst medical men, officials and public health reformers was also because this it seemed a denial of the need for sanitary reform. 'The communicability of cholera', stated

the British Medical Journal (B.M.J.), 'is a doctrine opposed by those who see most clearly the importance of sanitary reforms'.¹²⁴

Moreover, as Snow found when he published details of his water-borne theory, there was another dimension to this issue. Suggesting a single or specific cause for cholera, be it contagionism or anything else, was enough to incur the wrath of miasmatist and sanitarian thinkers who advanced a multi-factorial model of multiple causation. In fact most of those who believed that cholera was contagious thought it only became so when individuals or communities were subject to predisposing causes, i.e. contingent contagionism. In terms of a practicable and acceptable system of prevention, this brought them into line with the orthodox miasmatist position which held that the main thrust of prevention should involve an attack on a number of fronts, especially poor sanitary conditions, environmental hazards, and particular forms of behaviour.

Given that the medical profession might perhaps have felt compromised or undermined by its lack of progress since 1831, it is interesting to explore the roles it assigned to itself in 1853-54. Many medical men saw the new epidemic as an opportunity for the profession to resume its research into cholera with the ultimate goal of being able to prevent or cure it. So that 'the true laws of cholera' could be deduced, an editorial in the B.M.J. urged doctors to adopt a systematic approach to treating the disease and gather much needed

information on such matters as the ratio of diarrhoea to cholera cases, the duration of attacks and, most importantly, the degree to which different medicines and treatments were effective.¹²⁵ Finding a cure for cholera was arguably the profession's main priority. Some believed that this could only be achieved through a process of elimination whereby effective treatments could be identified and ineffective ones discarded. Following Chadwick's somewhat ignominious departure from the G.B.H. in the summer of 1854, itself partly attributable to the Board's failure to arrest the epidemic, his successor, Sir Benjamin Hall, appointed an Advisory Medical Council to pursue a systematic approach at the national level.¹²⁶ More generally, medical men were urged to assist the G.B.H. in any way possible 'so that the most successful means of combating cholera might be achieved'.¹²⁷

Whilst research into the etiology and pathology of cholera was felt to be imperative, it did not yield any pathbreaking information. Neither were what new insights did emerge of practical use to a public faced with the immediate prospect of the disease breaking out in its midst.

Recognising this, an editorial in the B.M.J. in 1853, argued that the duty of the profession was,

'To go onward to alleviate, by the kindness of our art, and the consolations of our presence, the visitations of pestilence in the haunts of dirt, famine and disease'.¹²⁸

Such views were welcomed by the Mayor of Leeds who had little doubt that medical men had much to offer; he stated that those individuals with medical, sanitary, or dietic powers 'stood in

the relation of fathers to a large class of individuals ... who were likely to be visited by the cholera'.¹²⁹ Even though medical men were unable to point to sure methods of prevention or cure, the medical press requested them to assist local authorities in a number of ways: (i) advising local authorities on the best modes of cleansing; (ii) appealing for funds for the relief of destitution and distress; (iii) instigating and assisting with systems of house-to-house visitation; and (iv) establishing Houses of Refuge.¹³⁰

As indicated earlier, medical men in Leeds, Bradford, Hull and Sheffield helped in all these ways, sometimes with and sometimes without official sanction. The Leeds Guardians had hundreds of copies of Dr Challice's pamphlet, Plain Directions for Poor People: How to Avoid Cholera, distributed throughout the town in the autumn of 1853.¹³¹ Dr Hall of Sheffield wrote to national and local newspapers setting out details of the measures the public could take to protect themselves.¹³² Hall also published his preventive advice in the form of a leaflet, the first edition of which sold out immediately. So that the poor could benefit from this advice, the Sheffield Guardians asked him to publish a second edition 'in a cheap form'.¹³³ Hall and other orthodox medical men offered standard advice and endorsed cleansing operations and systems of medical relief based on the prompt treatment of premonitory symptoms.¹³⁴ Similarly, there was a consensus about the need for individuals, especially members of the working class, to pay strict attention to personal and domestic hygiene, and diet. Their recommendations were

normative, reinforcing middle class views of the 'Great Unwashed' and typical of the wider rhetoric which called for the reform of working class morals and behaviour. By lending their authority to preventive measures, it seems that medical men were able to overcome their differences and act much more as a unified professional group in 1853-54.

On other issues, however, the profession remained divided. Serious differences of opinion arose above all over methods of treatment. Empirical observations made in past epidemics convinced the majority of medical men that it was possible to treat cholera effectively, particularly if the disease was caught in its early stages.¹³⁵ During the two previous epidemics, four categories of medicine - astringents, alteratives, stimulants and eliminants - had been prescribed by medical men. By 1853-54 there was, despite vociferous opposition, a growing feeling that astringents, which arrested bowel actions, were the preferred treatment. This was certainly borne out by the retrospective findings of the Treatment Committee of the Medical Council published in 1855.¹³⁶ The Committee reported that, according to data it had received from various medical men working in diarrhoea hospitals, the general percentage of deaths following each of the four major forms of treatment was as in TABLE 3.3

The Committee concluded as to the 'decided advantage in the alterative principle ... and still more superior advantage in the astringent principle as applied through chalk and opium.'¹³⁷ Nonetheless, central medical authorities even then

would not officially endorse astringents, because they said the statistics were 'very limited'.

TABLE 3.3

<u>TREATMENT.</u>	<u>PERCENTAGE OF DEATHS.</u>
ELIMINANTS	72%
STIMULANTS	54%
ALTERATIVES	36%
ASTRINGENTS	20%

Source: PP 1854-55 [1901] Vol XLV Report From The Treatment Committee Of The Medical Council, p. 15.

This rather cautious response was consistent with the statements and advice issued by the medical establishment prior to, or during, the epidemic itself. The G.B.H. was somewhat restrained on the question of sanctioning astringents throughout 1853-54. Although it advised people with premonitory symptoms to apply 'for medicine to stop looseness of the bowels' and stressed that medicines should not be taken unless prescribed by a medical man, it also emphasized that 'no single remedy is appropriate or safe for all people suffering from diarrhoea'.¹³⁸ Similarly, the Royal College of Physicians, whilst advising people to seek immediate treatment for diarrhoea from a qualified medical man, did not stipulate which form of treatment should be administered.¹³⁹ In one sense this was to be expected as contemporary therapeutics tended to treat the person rather than the disease.

On the question of which medicines should be avoided, the profession was more confident. Eliminative treatments were discredited well before the Treatment Committee condemned them in 1855 as they were said to hasten the process by which cholera passed from its premonitory to its advanced and most lethal stage.¹⁴⁰ This verdict was welcomed in the Lancet as giving

'the final blow to that most irrational and fanciful of blunders ... seeking to arrest a disease of which the most fatal symptom is colliquative diarrhoea, by the administration of agents having the effect of increasing that diarrhoea'.¹⁴¹

The situation amongst medical men in Yorkshire mirrored that nationally. On the basis of the advice they issued and the action they took, it is abundantly clear that medical men in Leeds, Bradford, Sheffield and Hull attached the greatest importance to catching cholera in its 'treatable' premonitory stage.¹⁴² Although there are no records of the types of medicine given at official dispensaries in Yorkshire in 1853-54, it seems reasonably safe to assume that astringents were once again made widely available, especially given the publicity and acclaim surrounding their place in the 'Sheffield Plan'. An important point, which historians have hitherto overlooked, is that the role of medical men in public health was not limited to monitoring or advising on environmental matters, clinical work was an equally important part of local sanitary programmes, especially during epidemics.

Whatever the emerging national consensus, there were still local enthusiasts. The renewed threat provided Dr Ayre of Hull with another opportunity to promote his much vaunted calomel cure. Ayre had treated cholera patients with calomel (a purgative) in 1832 and in 1849, and was convinced of its value.¹⁴³ However, other medical men in Hull had expressed grave doubts about this and the figures he used to support his claims.¹⁴⁴ In what became a very acrimonious and divisive public debate, the calomel treatment was condemned by several prominent practitioners and Ayre himself accused of dishonesty. These criticisms notwithstanding, Ayre's method of treatment had its supporters in Hull and elsewhere.¹⁴⁵ In 1854, it was Ayre who had declared the disease present in the town and was subsequently accused of false reporting to boost his product.¹⁴⁶ After concerted criticism, Ayre still maintained that he had seen 'four cases of distinct cholera' but conceded that he had been wrong to describe these as an 'outbreak', rather disingenuously he said it had been an 'appearance'.¹⁴⁷

The importance accorded to treatment provided an opportunity for alternative practitioners and systems to advance their claims. Homoeopaths and hydropaths, whose clients were mainly drawn from the middle class, saw cholera's return as more than an opportunity for short term profits, they also sought to win support for their entire systems of medicine. In pursuing this objective, they adopted their familiar two-pronged approach, seeking to discredit orthodox

medicine and putting the case for the superiority of their own systems, methods and practices.

Homoeopaths and hydropaths appear to have made a conscious and determined effort to put their arguments to as wide a cross section of the public as possible. In addition to advertising their services, they published details of their systems and treatments in newspapers, pamphlets and specialist journals. When cholera arrived in Sheffield, a local newspaper gave details of the various hydropathic precautions cholera patients could take before the arrival of a medical man.¹⁴⁸ A number of works such as Cholera and its Homoeopathic Treatment, Directions for the use of Homoeopathic Medicine in Asiatic Cholera and The Prevention and Cure of Cholera were available from homoeopathic bookshops, dispensaries and chemists throughout Yorkshire.¹⁴⁹ Worryingly, from the point of view of orthodox medical men, local officials in Sheffield appeared to endorse homoeopathy when they requested Samuel Eadon, a well known medical man, to produce a pamphlet on homoeopathic treatments for cholera.¹⁵⁰

Much of the cholera related literature published by homoeopaths and hydropaths in 1853-54 (and later in the decade), drew attention to the failure of orthodox medicine to provide effective forms of treatment for cholera. This was the case with Eadon's pamphlet in which he pointed out that 'In Newcastle, the people were treated according to the Allopathic methods; with what results, the bills of mortality now show'.¹⁵¹ Another homoeopath criticised orthodox medical

men for filling newspapers with confused and often contradictory advice. This practice, he stated, left the public bewildered and 'the anxious practitioner in a sea of doubts'.¹⁵² Unsurprisingly, he went on to recommend the use of homoeopathic medicines in cases of 'this destructive and panic engendering malady'. Although most homoeopathic treatments were based on the principle of simile, many homoeopaths advocated the use of medicines which contained small amounts (or combinations) of arsenicum, camphor, cuprom and veratum rather than purgatives.¹⁵³ To support their claims, homoeopaths used either comparative statistics or case histories. Whichever device they chose, their conclusions were the same; all agreed with Dr Horner of Hull who stated that 'the homoeopathic [treatment] is ... immeasurably superior to the old system in Asiatic Cholera'.¹⁵⁴

Homoeopaths and hydropaths offered advice not only on treatment, but on prevention. Samuel Eadon, for example, expressed the view that cholera was generated in and spread by miasmas and argued the case for sanitary improvements.¹⁵⁵ Like many orthodox medical men, homoeopaths believed that exposure to predisposing causes played an important part in determining who contracted cholera and issued warnings to the public to that effect.¹⁵⁶ Similarly, many held that premonitory diarrhoea was the first stage of cholera and, like regular practitioners, stressed the need for prompt treatment of suspicious bowel complaints.¹⁵⁷ Homoeopathic and hydropathic practitioners, though rivals in many ways, found common cause in attacking orthodox medicine with its leeching,

bleeding, cupping and administering large dosages of medicine.¹⁵⁸

It is probably anachronistic to suggest that uncertainties about etiology and pathology mattered that much to medical men at mid-century, when practice was mainly about diagnosis, prognosis and treatment. There was then a measure of consensus on clinical activity which could be, though not always was, carried over into preventive and containment programmes. It was this medicalisation of sanitary policy, together with more limited mortality, significantly reduced the opportunities for voluntary and philanthropic action by the middle class in the four towns.

3.5 THE WORKING CLASS

The working class in the four towns felt the impact of the 1853-54 cholera crisis mainly through increased publicity and cleansing activities by sanitary agencies, not with the disease itself. Coming so quickly after the 1849 epidemic and so long anticipated, there was more time and opportunity for the working class to consider their own response. The evidence on this casts doubt on the orthodox middle class view that the 'Great Unwashed' was apathetic about, and indifferent to, matters of public health.¹⁵⁹ This can be illustrated by considering the attitudes and actions of the working class in relation to (i) their bodily health, and (ii) sanitary reform.

The dominant popular model of the body in the mid-nineteenth century was derived from humoralism, whereby in health the different parts of the body were in harmony, while in disease there was disequilibrium. One's susceptibility to disease and imbalance depended on one's 'constitution', an amalgam of heredity and vitality, which could be modified by diet, lifestyle and one's morality. Popular remedies for disease concentrated on either building up the strength of the 'constitution', or stimulating the body in various ways to restore balance by producing demonstrable effects, such as vomiting, purging and sweating. In recent years historians have documented various popular responses to illness and the promotion of individual health.¹⁶⁰ There is now a consensus that the working class actively sought to protect and preserve their health by using both preventive and curative medicines. However, in many cases these were not sought from orthodox medical men but from the alternative sector which prospered throughout the nineteenth century, especially in the manufacturing districts of northern England.¹⁶¹

This non-orthodox medical community was not a homogeneous group, but a variety of individuals, branches and medical systems. It included, self medication, wisewomen, herbalists, chemists and druggists, bonesetters, vendors of patent medicines and, as discussed above, homoeopaths and hydropaths. From the point of view of regular medical men, anyone who professed or practised alternative medicine of any description was deemed a 'quack', regardless of his (or occasionally her) qualifications or social standing.¹⁶² The reasons for the

hostility of the orthodox branch of the profession to the alternative sector were many and varied. Underpinning this animosity, however, were two factors - the very real and formidable threats alternative medicine posed to the income of doctors, and the desire to promote the social status of orthodox practitioners.

Regular medical men had no choice other than to compete for business with all providers of medical care. The level of competition in the market for medical treatment was intense. As early as 1834, well before the heyday of patent medicines, James Morrison was reported to be selling well in excess of a million boxes of his pills to the public each year.¹⁶³ At the local level, competition was no less keen. Medical men in Sheffield in the 1850s, for example, faced competition from over ninety chemists and druggists.¹⁶⁴ Similarly, in Leeds in the 1850s an average of twelve hundred people each year, probably artisans and middle class, were reported to have sought treatment from the town's homoeopathic dispensary.¹⁶⁵ Adding to the insecurity amongst orthodox medical men was the knowledge that the services and treatments provided by the alternative sector were sought by people of all social classes. Although the cost of attending hydropathic establishments such as those run by Professor and Mrs. Melling in Sheffield and Dr Macleod in Ben-Rhydding was beyond the means of all but the most wealthy sections of society, artisans from Leeds and Sheffield were reported to be regular customers at similar establishments in Harrogate.¹⁶⁶ Likewise, whilst homoeopathy was especially popular amongst

the fashionable classes, one of the main reasons it flourished in manufacturing towns was said to be that it was cheaper than regular 'allopathic' treatments.¹⁶⁷ At the straightforwardly commercial end of the market, chemists and druggists traded with middle as well as working class customers. This point was made in 1854 by George Wilson, the Leeds medical man who had been in charge of medical relief during the cholera outbreak, when he observed that, 'many of the middle classes go to the druggist first, and only send for the surgeon when a certificate ... of death seems likely to be wanted for the registrar'.¹⁶⁸

Cholera certainly provided patent medicine vendors with an opportunity to market their products and increase their profits. As soon as the disease was diagnosed in Newcastle in the autumn of 1853, adverts for a wide range of patent medicines and specific anti-cholera remedies began to appear in local newspapers in Yorkshire. Throughout the 1853-54 cholera season adverts for products such as Reinhardt's anti-cholera mixture were common.¹⁶⁹ Ironically, patent medicine vendors took advantage of one of the few aspects of cholera's treatment over which orthodox medicine was in agreement - the need for the prompt treatment of 'premonitory' diarrhoea. Products which were normally advertised for the treatment of ordinary diarrhoea were suddenly represented as being effective in cases of premonitory diarrhoea and cholera. For example, it was claimed that Cutting's diarrhoea powders were 'an invaluable specific [which] had been so beneficial to thousands during the fearful spread of cholera in 1849'.¹⁷⁰

The market for medicines, pills and other nostrums was not yet dominated by the larger patent medicine companies. Local chemists, druggists and shopkeepers frequently advertised their own remedies in newspapers and other local publications. For example, Mr Naylor, a Leeds grocer, offered his Astringent Preventive for sale in the Leeds Times, promising a gratuitous supply for the poor.¹⁷¹ In common with patent medicine vendors, chemists portrayed their mixtures and concoctions as certain cures with supporting testimonials from local people. In 1854, Ridal's Sheffield Drug and Patent Medicine Establishment advertised a 'Never Failing Cure For Cholera', with Mr Heathcote of Pitt Street saying he had been 'cured by Ridal's ... of a most severe attack of cholera'.¹⁷²

Herbal and botanical cures for diarrhoea and cholera were not advertised as extensively as patent medicines, perhaps because the most popular herb, Lobelia, was an emetic. However, the Hull Advertiser, for example, published a letter from a herbalist which included a full recipe for 'a cure for cholera, diarrhoea and flux'.¹⁷³ The mixture was made up of a variety of powdered ingredients: angelica, bisort, tormentil, marsh mallow, cranesbill, ginger, cinnamon, flag root, myrrh and cayenne - and was to be 'served in a cup often'. As with most other remedies, special emphasis was placed on its value to the working classes.

The low incidence of cholera in 1853-54 means it is impossible to gauge the extent of working class patronage of

alternative practitioners. However, frequent complaints about the working class preference for quack remedies in 1849 (this despite free treatment by orthodox medical men) and the availability of a wide range of alternative treatments and remedies in 1853-54, suggests that the demand would have been as great as ever. The main point here is that although working class people may have ignored calls to seek official medical care, this should not be seen as a mark of indifference to health, but as a preference for their own or alternative remedies.

Unsurprisingly, the poor did not subscribe to the view that they were to blame for the insanitary conditions of the towns. 'From below' a number of factors associated with industrialisation were held to be responsible for urban squalor and the working class saw themselves as the victims rather than creators of insanitary conditions and disease. Industrial pollution was believed by the working class to be a major cause of misery. In 1849 a Chartist writer had argued that,

'Morbific agencies of the most baneful and widely diffused description are suffered to exist, unchecked in the great hives of industry: and the consequence is that the people drop like rotten sheep..'.¹⁷⁴

When cholera threatened in 1854 a working class newspaper in Sheffield published a number of letters from its readers in which complaints were made about the way in which impregnated air from mill ponds was likely to act as a source of the disease. The paper agreed that factory owners who lived in

'beautifully healthy mansions on the neighbouring hills' were to blame for the water and air pollution which, it claimed, inflicted 'misery, lassitude and sickness' on the poor.¹⁷⁵ Factory owners, it was suggested, should,

'... enter the humble dwellings that cluster their borders and they will feel ... that an immense amount of responsibility rests upon them for allowing such life destroying places to remain'.

There was another dimension to this argument. The working class felt that the process of industrialisation had also deprived them of customary rights to clean water, a commodity which was 'vital for comfort and public health'.¹⁷⁶ Water shortages and pollution made washing and bathing difficult for most people. Reporters in the Sheffield Free Press found it incredible that the artisan class should be described as the 'the Great Unwashed' and, on behalf of the poor, demanded that, 'we should very much like to know how they are [to be] washed'.¹⁷⁷

Despite environmental pollution and the absence of amenities there is evidence that the working class made considerable effort to keep their homes, yards streets and neighbourhoods clean. Clearly, self-help initiatives such as those seen in 1849 and traditional bouts of cleaning at certain times of the year, were not a realistic solution to the problems posed by inadequate refuse collection, unpaved streets, and the lack of sewers and drains which made the urban environment so hazardous. In 1849 the editor of the Chartist Northern Star argued that sewerage, flushing,

drainage and other sanitary safeguards were 'beyond the power of the individual'.¹⁷⁸ This, along with middle class moralising, was still a great source of frustration and resentment in 1853-54, and prompted a working man from Bradford to protest that,

'... we pay our rates, we pay our rents and we have families we love, but if cholera comes ... and one of dies, the papers will say - 'One death of cholera is reported to have taken place ... the victim resided in a low and filthy neighbourhood'. We are dissatisfied but cannot help ourselves'.¹⁷⁹

Criticism of official complacency with regard to permanent improvements was widespread in 1853-54, coming from people of all classes. Adding insult to injury amongst the poor in Bradford and Sheffield was the belief that when improvements were made, they were concentrated in areas inhabited by the better off.¹⁸⁰ From a working class perspective, the attitudes and behaviour of industrialists, landlords and local authorities were symptomatic of the new social relationships which accompanied industrialisation. The argument that social obligations were no longer being met by those in power came to the fore in Hull in 1849, and resurfaced in the other towns in 1853-54. One Bradford worker, who was critical of landlords and the local authorities, complained bitterly that,

'... so long as this mammon worshipping spirit ... is allowed to predominate over moral duty, so long shall we have the misery, disease and penury which is at present in our land'.¹⁸¹

In Leeds, allegations that the Council was failing to meet its sanitary responsibilities prompted residents of the town's notoriously unhealthy East Ward to take action, with over 1,500 of the 'Great Unwashed' signing a memorial demanding immediate sanitary measures.¹⁸²

There is clear evidence of working class people and communities taking a variety of steps to protect themselves from cholera in 1854 in particular. Some of these, such as attempts to clean the home and attendance at official dispensaries, were welcomed by the authorities, others, such as the use of alternative medical systems or popular remedies and the revival of traditional preventive measures, were usually condemned. The range of precautions taken by the working class, and the reasons for their implementation, are interesting because they suggest that the poor did not see environmental conditions as the sole determinant of health. Moreover, when the working class turned to an analysis of the relationship between insanitary conditions and ill health, it sometimes reached very different conclusions from those of middle class reformers.

Although official advice about regimen and lifestyle was commonplace when cholera threatened, officials undoubtedly attached far greater importance to the necessity for the working class to look to bodily, domestic and neighbourhood cleanliness. Whilst it cannot be disputed that environmental conditions were a matter of great concern to working people, there is evidence to suggest that their view of the causes of

disease was not as one dimensional as that of middle class sanitarians. Indeed, some appear to have thought that environmental conditions were just one of several determinants of ill-health; others went further, completely reversing sanitarian analysis by arguing that poverty caused disease. Such a formulation had clear economic and political implications which were seized upon by Chartists and other radicals. For example, in 1849, a Chartist Councillor in Sheffield attacked all the 'croaking about cholera' arguing that 'more of the population die of starvation..'.¹⁸³ He went on to declare his belief that the fuss surrounding cholera was designed to divert the attention of the working class 'away from affairs of much more importance', which were the struggles for better wages and better food. A Leeds Chartist in 1849 had been more expansive, setting out a number of ways in which the health of the poor could be improved.¹⁸⁴ Foremost amongst these were improved wages which would allow the working class: (i) to buy the necessary quantity of high quality food to enable them and to prolong their lives and keep their bodies in 'health and vigour'; (ii) to afford roomier, more comfortable and healthier housing; (iii) to purchase better clothing and other 'comforts'; and (iv) to allow women to stay at home so they could 'keep things as clean ... and healthy ... as possible'. Additionally, he demanded that fatigue, which was so damaging to the health of the working class, should be eliminated through a reduction in working hours. 'These are the things we want', he declared, and they could be achieved by 'the annihilation of all class

and hereditary government, and the establishment of a thorough democracy'.

The view that wages and living and working conditions were important determinants of health resurfaced in 1853-54. It has already been noted that in Sheffield there was a feeling that a serious epidemic was unlikely. Significantly, this was not due to improved sanitary conditions but to the improvement in trade which had ensured that 'the means of living are enjoyed to an unusual extent'.¹⁸⁵ However, this cut little ice with a radical journalist who, in response to official advice calling for the working class to shun overcrowding, avoid fatigue and modify their diets, challenged the G.B.H.,

'[To] issue another notification telling the class I belong to where they are to get roomier houses, and how they are to continue to eat frequently and to abstain from fatiguing themselves'.¹⁸⁶

The way in which sections of the working class saw the solution to health problems in political terms is highly significant because it helps to throw light on an issue which has puzzled historians, namely, why the working class failed to support the public health movement or agitate for sanitary improvements.¹⁸⁷ On the basis of the arguments of Chartists and radicals at the local level in Yorkshire, it appears that political representation was seen as the key to improving the lot of the working class. With increased political power, the argument went, progress could be made towards improving wages, living and working conditions. It is interesting to note here

that when working men were able to exert influence through local politics, as was the case in Sheffield in the mid-1850s, this was used to improve environmental conditions in areas inhabited by the poor.

3.6. 1853-54 IN COMPARATIVE PERSPECTIVE.

3.6.1 MORTALITY

The most obvious difference between the cholera years of 1848-49 and 1853-54 was in levels of mortality. Cholera's demographic impact upon Leeds, Hull, Sheffield and Bradford in the autumn of 1853 was minimal. Even in 1854 it claimed only two to three hundred lives across the four towns, with a negligible effect on overall levels of mortality.¹⁸⁸ Sheffield was the only town where mortality was comparable to 1848-49. It is worth noting that in the 'epidemic' year of 1854, diarrhoea caused three times as many deaths as cholera in Sheffield, four times as many in Leeds and Hull, and, remarkably, almost ten times as many deaths in Bradford.¹⁸⁹ Despite the fact that nationally and in Yorkshire, diarrhoea claimed many more lives than cholera, it aroused little concern amongst contemporaries and attracted still less comment. Whilst this corroborates Wohl's claim that cholera's social impact bore little relation to its statistical importance, it raises a fundamental question for the historian about contemporary perceptions of mortality crises. If an epidemic was perceived or defined solely on the basis of morbidity or mortality, then 1853 and 1854 (like most years in

the nineteenth century) would have been remembered as diarrhoea rather than cholera years. That this was not the case confirms the claim that epidemics should be discussed as social rather than biological events.

3.6.2 RESPONSES

What set 1853 and 1854 apart from other years in the early 1850s in Yorkshire was not so much the presence of an exotic disease, as that the occurrence of cholera inspired sanitary activity. In both these years there were extraordinary political and social responses. Most obviously, 1853 and 1854 were distinguished by bursts of public activity orchestrated L.B.H.s, medical men and by the G.B.H. Taken a step further, it can also be argued that the unusual level of official public health activity contributed to the development amongst the public of what can be described as an 'epidemic consciousness'. This gave rise to particular forms of behaviour and revealed certain attitudes which were either absent, hidden or unusual in other years. As such, the popular reactions and attitudes which came to light in 1853-54, and 1848-49 for that matter, were as much a response to the effects and implications of official sanitary and medical measures as to cholera per se. From this perspective, it is again clear that the crisis of cholera is best understood as a socio-political crisis, and cholera epidemics more appropriately defined as socio-political phenomena.

The official response to the threat of cholera at the local level in the autumn of 1853 demonstrates that the

various authorities responsible for executing the N.R.D.P.A. were intent on ensuring that the 'mistakes' of 1848-49 were not repeated. A major difference was the near uniformity in the timing and nature of action in the four towns. It seems that the advice of the G.B.H. was followed, right down to the specific detail of the 'Sheffield Plan'. Of course, the experience of 1849 and the provision of the Public Health Act had produced, if not uniform structures, then at least clearer definitions of responsibilities. Thus, the uniformity of action came from administrative as much as from medical and sanitary agreements.

3.6.3. THE EPIDEMIC OF 1853-54 AND SANITARY REFORM.

Ostensibly, the official response to the threat of cholera in 1853-54 supports the view that the cholera was the sanitary reformers' best friend at the local level. The absence of epidemic cholera in 1853-54 was certainly a source of satisfaction to the local authorities in each of the four towns. However, the vigorous implementation of sanitary and medical precautions did little to reassure the reformers, who were highly critical of what was widely seen as the official neglect of sanitary improvements between 1849 and 1853. Indeed, it was frequently argued that temporary measures of the type seen in 1853-54 were of little use in terms of producing lasting improvements in the public health. Moreover, the thesis that cholera was the sanitary reformers' best friend is less than convincing when considered in the light of official responses to the end of the epidemic threat

and longer term sanitary policy in the decade 1855-65. In this context a number of variables need to be considered as well as, and in comparison to, the impact of cholera.

3.6.3.1 LEEDS

As soon as the threat of cholera diminished, cooperation between the local authorities ended and the sanitary cleansing campaign came to abrupt end. Although the Council continued with drainage and other improvement projects after 1854, studies of its record have not been favourable. Barber argued that four aspects of municipal policy caused dissatisfaction, namely: (i) the refusal to accept responsibility for disposal of human and domestic waste until 1859; (ii) the decision to augment the water supply by drawing water from the River Wharfe after 1854 despite warnings about pollution; (iii) the failure to force builders to comply with the planning and building regulations laid down by the 1842 Improvement Act; and (iv) the fact that the sewerage system, which was perhaps the Council's most notable achievement, had little impact because many landlords declined to connect their premises to mains sewers.¹⁹⁰

There was a marked contrast between the Council's record and that of the Guardians. According to Toft, the latter pioneered public health measures in Leeds throughout the middle decades of the century.¹⁹¹ As indicated above, the Guardians assumed responsibility for medical measures and assisted the Council with cleansing operations when the N.R.D.P.A.s were in force in 1848-49 and 1853-54. Under the

terms of the new Nuisance Removal Act, 1855, however, the responsibility for nuisance removal and sanitary cleansing was transferred to the Council which was far from zealous in this work and tended to leave the responsibility for cleansing and refuse collection to individual citizens. Despite having their powers stripped away, the Guardians 'persisted in regarding the prevention of disease as an integral part of their work' and thus became 'the most energetic body in sanitary work in the town'.¹⁹²

Commendable as the Guardians' efforts were, they were not the answer to Leeds' massive environmental deficiencies and the related problems of ill health and disease. Disquiet about the situation was such that the town was subject to inspections by officers of the Medical Department of the Privy Council in 1858 and 1865.¹⁹³ The second of these, which was conducted by Dr Hunter, coincided with the next threat of cholera, but was prompted by the high rate of mortality caused by fever and diarrhoea in the early 1860s. Hunter found that, 'Leeds in August, 1865, presented a surprising sight, bringing to remembrance the condition of many English towns of twenty years ago'.¹⁹⁴ He pinned the blame for this on the Council's neglect and incompetence. His assessment of the Guardians was quite different; he praised their cleansing and nuisance removal work, but pointed out that 'all this activity is unlawful and is founded on the fiction of the Disease Prevention Act being in force'.

Although the Council attempted to deflect Hunter's criticism, his report was welcomed by many people in Leeds and sections of the local press. The Leeds Mercury, reported that Hunter's work corroborated its own and other independent researches which had blamed the Council; 'instead of vindicating their past neglect', it argued, 'they should strive to efface its deploring effects'.¹⁹⁵ The Council responded to mounting pressure for remedial action in 1865 by drafting another Improvement Bill which contained Clauses which would increase its sanitary powers and enable it to appoint a Medical Officer of Health. The Bill became law early in 1866. According to Toft the passage of the Act and appointment of a Medical Officer of Health meant that, 'the year 1866 marked a watershed in Leeds' sanitary history'.¹⁹⁶ That 1865-66 were also cholera years was simple coincidence.

3.6.3.2. BRADFORD.

Cholera's retreat in 1854 was marked by an immediate decline in the amount of sanitary and nuisance removal work undertaken by the Council as the L.B.H. The available evidence confirms that throughout the period 1855-1865 cleansing, nuisance removal and related work was not one of the Board's greatest priorities.¹⁹⁷ This reduction in sanitary work was justified on the grounds of the diminished severity of epidemics.¹⁹⁸

With regard to permanent improvements, Thompson has stated that there was 'much talk but little action'.¹⁹⁹ There were, however, a number of important developments towards the

end of the 1850s, yet there is no evidence to indicate this was due to any concern about public health in general, let alone cholera. The main improvements were street widening and paving schemes in the town centre, inspired by concerns about amenity and trade. The urgency attached to this work, and the fact that its main beneficiaries were small businessmen, proved to be somewhat controversial, with an alliance of Tory millowners and working class rate-payers arguing that priority should be given to constructing a comprehensive sewerage system, a measure which should benefit people of all social classes.²⁰⁰ Work on a sewerage scheme did not begin until 1859 and then was only started after flood water reversed the flow of the existing drains and sewers and caused thousands of pounds worth of damage to shops, warehouses and stock in the town centre.²⁰¹ As was the case in Leeds, the construction of new sewers and water supplies did not produce immediate benefits because property owners did not link their premises to the mains system. Similarly, although attempts to improve the water supply were made after the company was municipalised in 1855, progress in improving quantity and quality was painfully slow due to a combination of factors including technical problems, the priority given to industrial customers and the tapping of suspect sources in times of shortage.²⁰²

The priority attached to the street improvements and the reasons for the implementation of the drainage scheme and the inadequacy of the water supply suggest that the Council used its powers to further the economic interests of the social grouping which comprised its greatest part - the middle class.

This point is further illustrated by the Council's reluctance to tackle another serious environmental problem, the smoke nuisance. Although the 1850 Improvement Act empowered the Council to reduce smoke pollution, little was done on this front. Councillors cited two reasons: firstly, smoke helped to preserve the public health by cleaning the air of the impurities which caused epidemic diseases; and secondly, that forcing manufacturers to control factory emissions would have pernicious economic consequences. In Thompson's view the effect of the Council's public health policy, which was based upon the economic needs and interests of local businesses, was that, 'the poor were to benefit less than any other group from environmental improvements in Bradford.'²⁰³

3.6.3.3. SHEFFIELD

In 1854 members of the Sheffield Highway Board had expressed similar views to Dr Hall and members of the public, arguing that temporary cleansing measures would only help to combat cholera if they were implemented in conjunction with permanent improvements.²⁰⁴ Thus, even though cooperation between the different sanitary agencies ended late in 1854, the Highway Board, under the direction of Isaac Ironside, pressed ahead with the construction of a system of deep drains. The scheme stood as testimony to Ironside, both practically and as one of the clearest manifestations of 'rate-payer democracy'. Not surprisingly, the Board concentrated its work on those districts where 'the poorest rate-payers suffer from disease' and thus confirmed that the main intention of the drainage scheme was to provide 'all

classes with the same sanitary advantages'.²⁰⁵ The Board completed 2,640 yards of drains in 1854 and a further 3,444 yards in 1855.²⁰⁶ However, work was stopped when it emerged in the late 1850s that the Board did not have the legal jurisdiction for the work.²⁰⁷

Effectively, the revelation that the Highway Board had been acting illegally marked the end of major sanitary work for some years, because none of the other agencies had appropriate powers or were interested.²⁰⁸ In 1858, a specially appointed committee reported to the Council that sanitary conditions were deteriorating and could not be improved unless the hand of the Council was strengthened by the adoption of the Public Health Act, or an Improvement Act.²⁰⁹ Again, the problem was seen to be the structure of local government which had to be reformed before sanitary reform could be effected. The Council decided to prepare a Bill which would 'materially improve the sanitary condition of the borough and promote .. the comfort and convenience of the inhabitants, particularly the working class'.²¹⁰ The Improvement Bill, 1858 closely resembled its predecessor and aimed to rationalise Sheffield's sanitary administration by transferring the powers held by Highway Boards and Improvement Commission to the Council. Simultaneously it intended to extend the Council's sphere of activities by providing it with wide ranging powers. These included the power to undertake cleansing, control smoke pollution, provide new drains and sewers and devise and enforce building and planning regulations.²¹¹

The proposed Act polarised opinion. As had been the case in 1851, the debates sparked by the Bill were not over the desirability of improving sanitary conditions and the public health so much as which agency - the Council or Highway Boards - should be responsible. According to Fraser the events of 1858 'occasioned a fundamental conflict between rate-payer democracy and the municipal leviathan'.²¹² Once again, therefore, the central plank in the opposition's case was the issue of township autonomy. Both sides in the argument appealed for the support of the working classes; supporters arguing that the Bill's main intention was to ensure 'that the abodes of the poor may be freed from those causes of disease from which the middle classes have escaped', whilst opponents claimed that it would increase local taxation and deprive working men of representation and participation in local politics.²¹³ The Bill became the main issue on which the municipal elections of 1858 were fought. Opponents fielded candidates in every ward and secured an overwhelming victory; the new Council immediately abandoned the Bill.

Rejection of the Bill meant that the void in sanitary arrangements remained. Moreover, the propaganda of opponents made a deep and lasting impression on working class rate-payers, such that it was commented in 1861 that many working men, 'systematically oppose sanitary reform for fear of extra taxation'.²¹⁴ Against this backdrop, there were few sanitary projects undertaken, a fact that was confirmed explicitly by the Council itself in 1860 when it was said that it was not

expedient 'at the present time to consider ... improving the sanitary condition of the borough'.²¹⁵

From the end of 1850s criticism of local public health arrangements mounted. In 1859 the Registrar General drew attention to the high rate of mortality in Sheffield and ascribed it to 'defective sanitary arrangements'.²¹⁶ In 1860 a local medical man, Dr Saunders, endorsed Harriet Martineau's unfavourable assessment of sanitary conditions and local administration published in the popular periodical Once A Week.²¹⁷ Further adverse comment came from The Builder, which criticised the way in which sanitary functions were divided between the different authorities and argued that Sheffield in the early 1860s was as 'devoid of the decencies of civilisation as it was in the Dark Ages'.²¹⁸

In 1864 growing concerns about sanitary conditions again reached a head and prompted the Council to appoint a Committee to investigate the possibility of adopting the 1858 Local Government Act.²¹⁹ Once again determined opposition was anticipated. However, the hand of reformers was strengthened by the burst of Dale Dyke Dam in March 1864. Only days before the disaster - which claimed the lives of 240 people - the Council had requested the unpopular water company to improve supplies.²²⁰ Following the burst, pressure for an improved supply and municipal ownership of the water works grew considerably. Crucially, this could not be achieved unless the Council bought the Company out. Fraser has argued that to some extent the water question diverted attention away from

the sanitary issue.²²¹ The situation can, however, be interpreted differently for two reasons: firstly, the flood led to enormous sanitary problems which underlined the need for the Council to have greater powers; and secondly, because it was recognised that an improved water supply was essential to sanitary improvements. In July 1864 the Council finally voted to adopt the Local Government Act and, in September, met for the first time as the L.B.H.²²² Again, that this happened the year before a new cholera scare was coincidence.

3.6.3.4. HULL

The threat of cholera undoubtedly helped reformers to secure the passage of the Hull Improvement Act in 1854 which increased the powers of the L.B.H.²²³ Although it was to be eleven years before cholera threatened again, the L.B.H. used its powers to make steady if unspectacular progress on a number of fronts. Through the Act, the L.B.H. began an ambitious programme of improvements which saw, amongst other things, the resumption of work on the Eastern District deep drainage (sewerage) scheme, the reorganisation of night-soil and refuse collection, and the start of work on street improvements.²²⁴ The expense of this work led to disquiet in various quarters, with property owners, for example, objecting to having to pay around a third of the cost of street improvements.²²⁵ This matter was eventually resolved in 1857 when the Council bowed to pressure to finance the work from the rates alone.²²⁶ More serious difficulties were encountered with the drainage scheme where the L.B.H. faced two related problems. Firstly, Hull's topography - the town

occupied a flat, low lying sight on the banks of a tidal river - which made effective drainage extremely difficult. In many areas there was a 'fall' of only four feet per mile which meant that flushing was vital if ebb tides were not to reverse the flow. This represented a formidable technical problem and throughout the 1850s professional and lay opinion was divided over whether or not a 'pumped' or 'gravitational system' should be built.²²⁷ The former was thought to be the more effective, though most expensive solution. This led to the second problem, rate-payer opposition to excessive municipal expenditure. In 1853 rate-payers had been horrified to learn that the Council intended to construct a pumping station for the Eastern District scheme at a cost of over £160,000 and they immediately formed the 'Anti-Deep Drainage League'. Although they failed in this objective, they succeeded in forcing the L.B.H. to abandon the idea of pumping. Concern about the cost of the scheme continued and, in 1855, even the editor of the pro-improvement Hull Advertiser urged financial prudence on the Board, explaining that although rate-payers approved of the scheme, all works 'should be entered into ... with a view of the ability of people to pay for them'.²²⁸

The Eastern District scheme was completed in 1859 and in 1863 the L.B.H. initiated work on the Western District scheme. Again, however, it was decided to construct a gravitational system. In a sense, this was a cause of some surprise because the gravitational system in the Eastern District was thought to have many deficiencies.²²⁹ It seems it was more important

for schemes to be politically acceptable than technically efficient.

Clearly, rate-payer activity played a significant part in checking some of the L.B.H.'s more ambitious projects. However, work in other areas went ahead with fewer difficulties. Building and planning regulations were gradually tightened up such that by 1866 all new streets had to be levelled, sewered and paved. According to Beckett, this had the widest implications as it ensured that the practice of building first and fitting drainage and other amenities later was reversed.²³⁰ The definition of 'nuisances' and the scope of the Nuisance Inspectors work was gradually extended. Similarly, the inspection and regulation of Lodging Houses became more rigorous with the result that many were forced to close because of the dangers they posed to health.²³¹

By the 1860s, the town's sanitary lobby seemed satisfied that, despite occasional controversies and without the stimulus of a cholera epidemic, the L.B.H. had done much to improve public health. One historian has noted that in its first decade, the Board had 'wonderfully changed the general aspect of Hull'.²³² This view was supported in an editorial in the Hull Advertiser in 1863 where the L.B.H. was praised for its 'progressive energy and resolved determination to keep steadily in the path of enlightened progress'.²³³ The paper warned, however, against complacency, stating that if the health of the poor was to be improved the L.B.H., 'must continue its labours while there remains a nuisance to abate,

or an improvement to carry out'. Distinctions had always been made between 'imported' and 'local' cases of cholera, but by the mid-1860s the health of the town, seems to have become a distinct issue from that of the health threat posed by the port, emigrants and trade. This was important in the 1865-66 national epidemic, when cholera was increasingly identified as a port disease.

FOOTNOTES TO PART 3

1. Hull Local Board of Health, Sanitary Committee, (HSC), 24.8.1853. States that two cases had been reported on a ship which had arrived from Bremen and one fatal but isolated case had been reported in the town. Also see: Times, 13.9.1853. Which reports that isolated cases had occurred at other seaports.
2. BPP 1867-68 [4072] XXXVII, Report on Cholera Epidemic of 1866 in England, Supplement to the Twenty Ninth Annual Report of the Registrar General of Births, Deaths and Marriages in England, Appendix I, pp. 1-2. The Registrar General's estimates are again higher than those given in local sources.
3. Times, 17.9.1853.
4. Ibid, 22.9.1853; Leeds Mercury, (LM), 24.9.1853.
5. Ibid.
6. Hull Advertiser, (HA), 4.2.1853. Dr Daly made the criticism. Also see: HA, 23.9.1853, for an editorial which praises the Board's work.
7. HSC, 24.8.1853; 7.9.1853.
8. Ibid, 7.9.1853.
9. Ibid.
10. Hull Local Board of Health (HLBH), Letters, 8.9.1853.
11. HLBH, Minutes, 22.9.1853. The Sculcoates Guardians declined an invitation to act in conjunction with the other agencies. They did, however, make plans to divide their Union into separate medical districts and to appoint medical staff.
12. HA, 22.9.1853.
13. Ibid, 21.10.1853.
14. Ibid.
15. C. Beckett, Public Health in Hull-1848-1871: being a study of the work of the L.B.H. after the Public Health Act, unpublished MPhil thesis, University of Hull, 1984, pp. 103-107.
16. HA, 21.10.1853.
17. Ibid, 30.9.1853.; 23.9.1853. The latter reported that in 1848-49 Hull 'was not in half such a salubrious state as

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- regards sewerage and the removal of nuisances as it is now'.
18. *Ibid*, 23.9.1853. An editorial argued that 'the persons who are now doing all, in their power to paralyse the labours of the L.B.H. will be responsible for the appearance of the plague'.
 19. Beckett, *op cit*, note 15 above, pp. 105-106.
 20. *Municipal and Sanitary Enactments, 1854-1897, The Kingston-Upon-Hull Improvement Act, 1854.* pp. 1-15. Parliament discarded the contentious Clauses which would have ended rate exemption on certain tenement properties.
 21. Bradford Observer, (BO), 29.9.1853. Gives details of a meeting of the Guardians at which the Irish were blamed for poor sanitary conditions. One Guardian stated that an RC priest should act as a visitor to the Irish as 'there was no doubt nuisances would be attended to immediately, but not otherwise'. Another Guardian asserted that the Roman Catholic priest should leave the town and take the Irish with him'.
 22. For details of Bradford's Irish Community see: C. Richardson, 'Irish Settlement in Mid-Nineteenth Century Bradford', Yorkshire Bulletin of Economic and Social Research, 20 (1), 1968, 40-57.
 23. *Ibid*, 22.9.1853.
 24. *Ibid*, 29.9.1853.
 25. *Ibid*; Also see: B. Thompson, 'Public Provision and Private Neglect: Public Health', in D.G. Wright and J.A. Jowitt, eds, Victorian Bradford, 1981, p. 142.
 26. BO, 6.10.1853. Also see Bradford Board of Guardians (BBG) Minutes, 14.10.1853.
 27. BO, 27.10.1853.
 28. *Ibid*, 22.9.1853.
 29. *Ibid*, 6.10.1853.
 30. J. Toft, *Public Health in Leeds in the nineteenth century: a study in the growth of local government responsibility c.1815-1880*, Unpublished M.A. thesis, University of Manchester, 1966, p. 63.
 31. Leeds Union Guardians (LUG), Minutes, 28.9.1853.
 32. *Ibid*, and Letterbook: Letters received. A communication from the G.B.H. explained that this was necessary at the Guardian's Nuisance Removal powers only related to

nuisances where cholera appeared. The Council was responsible at other times.

33. LM, 8.10.1853.
34. Leeds Times, (LT), 24.9.1853; LM, 8.10.1853. which stated that action was still being taken.
35. Ibid, 17.9.1853. As was the case in Sheffield in 1848, and in Bradford and Hull in 1853, the authorities in Leeds were in agreement: emphasis was placed on reducing the chances of cholera establishing itself, a move which was wholly consistent with the miasmatic theory.
36. Times, 29.9.1853.
37. J. Furness, Record of Municipal Affairs in Sheffield, 1843-1893, 1893, p. 101.
38. Sheffield Borough Council: Health Committee (SHC) Minutes, 7.11.1853.
39. Sheffield and Rotherham Independent, (SRI), 17.9.1853.
40. Ibid.
41. Ibid, 1.10.1853.
42. Ibid, 17.9.1853.
43. Times, 13.9.1853.
44. Sheffield Times, (ST) 17.9.1853; 24.9.1853., differed to its local rival in that it expressed concern about sanitary conditions and the apparent confusion amongst the local authorities.
45. W. Lee, The Nuisance Removal and Diseases Prevention Act; Report of the G.B.H. on Messrs. Wilkinson's Flax Mills At Leeds, 1854, p. 3; and Lancet, 1854, i, p. 293.
46. Leeds Intelligencer, (LI), 11.3.1854.
47. LM, 6.5.1854.
48. Ibid, 2.9.1854.
49. Report of the Cholera Epidemic, op cit, note 2 above, pp. 13-14.
50. LI, 11.3.1854.
51. Ibid; LM 4.3.1854. The report corroborated this view, stating that the mill was 'the largest and best conducted' in the town.

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52. LM, 11.3.1854. The medical men reported that the heap should be treated with disinfectant, covered with soil and then removed.
 53. Toft, op cit note 30 above, p. 64.
 54. Ibid, p. 65.
 55. LM, 25.3.1854.
 56. Lee, op cit note 45 above, p. 8.
 57. LM, 25.3.1854.
 58. Lee, op cit note 45 above, p. 5. states that every room at the mill was whitewashed and ventilated.
 59. Lancet, 1854, i, 293.
 60. LI, 11.3.1854.
 61. LT, 8.4.1854; Lancet, 1854, i, 409. Report that a number of men who involved in cleansing at the mill and depot developed symptoms.
 62. LI, 1.4.1854.
 63. LM, 11.3.1854.
 64. LI, 4.3.1854.
 65. Ibid, 25.4.1854.
 66. Ibid, for example, reminded its readers that the situation demanded sanitary action 'not only on the part of the authorities, but more especially the individual'. The paper added that 'personal as well as public observance of the laws of health' were required if cholera was to be defeated.
 67. Ibid, 11.3.1854.
 68. LM, 11.3.1854..
 69. Ibid, 22.4.1854.
 70. Ibid, 22.4.1854.
 71. LI, 4.3.1854.
 72. Ibid, 11.3.1854. Six dispensaries were opened, one at the Mendacity Office, the others at the surgeries of Town Surgeons.
 73. Ibid, 18.3.1854.
 74. Ibid, 1.4.1854.

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75. LT, 9.9.1854.
 76. LM, 16.9.1854.
 77. Ibid, 18.3.1853.
 78. LM, 11.3.1854. In particular, argued Gavin, the decision to site the manure depot 'amongst houses and factories ... wantonly trifled with human life'. Members of the public echoed this view and were incensed that the Council had ignored pleas to remove nuisances from the area around Wilkinson's mill.
 79. BO, 24.8.1854.
 80. Ibid, 26.10.1854. Also see Bradford Council Sanitary Committee, (BC-SC), Minutes, 21.9.1854. These state that the local Registrar was requested to forward details of cholera deaths to the Council and monitor diarrhoea and dysentery mortality.
 81. BO, 31.8.1854. A local medical man wrote to the paper stating that his experience Medical Officer in charge of the Cholera Hospital in 1832 left him in no doubt that diarrhoea 'was not only the premonitory stage of the disease, but actually constituted its inceptive stage.
 82. BC-SC, Minutes, 6.9.1854. For joint effort see, BBG, Minutes 20.9.1854.
 83. BBG, Minutes, 20.9.1854. The Sanitary Committee's records do not exist. Some details of its work are included in other sources, but it has not been possible to establish where medicines were available, for example, or whether the number of medical officers or nurses employed was increased.
 84. Bradford Corporation Yearbook, Report of the Sanitary Committee, 1854, 4.10.1854.
 85. Ibid.
 86. BO, 24.8.1854.
 87. LBH, Letters 22.4.1854. Also see: Lancet, i, 1854, p. 529, where it states that the Swedish government had decided that all British ports were 'suspected'.
 88. LBH, Letters, 31.8.1854.
 89. HSC, 30.8.1854., and HA, 2.9.1854. Both reported the usual warning about
 90. HSC, 6.9.1854.
 91. Hull and Eastern Counties Herald, (ECH), 2.9.1854.

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92. HA, 23.9.1854.
 93. Ibid.
 94. ST, 2.9.1854.
 95. Sheffield Local Register, (SLR), 28.8.1854. Also see, BO, 7.9.1854. In which it is reported that the desire to flee from Cleethorpes was so intense that 'every possible vehicle was called to convey visitors to the station'. A special train was laid on for those wanting to return to Sheffield.
 96. SRI, 2.9.1854.
 97. ST, 2.9.1854.
 98. SRI, 16.9.1854, and ST, 9.9.1854.
 99. Ibid, 30.9.1854.
 100. Sheffield Highways Board, (SHB) Minutes, 21.3.1854. Where it is recorded that the Board was assisting the Guardians by identifying nuisances. Also see: The Improvement Commission and Sanitation, Miscellaneous Papers. These state that the Commissioners staff were engaged in street cleansing throughout the year.
 101. SHB, Annual Report, 27.3.1854.
 102. SHC, Minutes, 12.9.1854.
 103. ST, 9.9.1854. There was a stark contrast with the optimism seen in 1853.
 104. Ibid. Also see Sheffield Free Press, (SFP), 9.9.1854. In contrast to Sheffield's other papers, the Press reported that Sheffield was ill prepared for the epidemic and that this was due in part to the structure of the town's sanitary administration.
 105. SHC, Minutes, 11.9.1854.
 106. SRI, 16.9.1854.
 107. Ibid. This contained a warning that the public should only supplement water supplies from wells, not polluted rivers. Also see; SFP, 9.9.1854. Where a medical man was quoted as saying that the water situation was so serious that visiting neighbourhood adjacent to waterways was 'sufficient of itself to cause cholera'.
 108. SLR, 21.10.1854; cf. SLR 16.9.1854.
 109. SFP, 16.9.1854.
 110. SLR, 21.10.1854, and SFP, 7.10.1854. Both reported that September had been exceptionally hot and only one and a

half inches of rain had fallen. For details of Sheffield's problems with water supply see: D. Carr, The politics of Sheffield water, unpublished MA dissertation, Sheffield City Polytechnic, 1990, and Furness, op cit note 17 above, which states that similar problems were encountered in 1859 and 1864.

111. Times, 29.9.1854.
112. SFP, 16.9.1854. ST, 16.9.1854.
113. ST, 9.9.1854.
114. Ibid, 16.9.1854. There are no further records of the number of people who applied for treatment at the dispensaries.
115. SRI, 23.9.1854.
116. Ibid, 16.9.1854.
117. Times, 29.9.1854.
118. Sheffield Borough Council (SBC): Minutes, 31.10.1854.
119. Ibid, 17.9.1854.
120. Lancet, 1853, ii, p. 393.
121. SRI, 16.9.1854.
122. Lancet, 1854, i, p. 131.
123. B.M.J., i, 1853, 484-9.
124. B.M.J., ii, 1853, 1007-8.
125. B.M.J., ii, 1853, 979-93.
126. F.F. Cartwright, A Social History of Medicine, 1977, p. 109. The Council determined to prove whether or not Snow (or Budd) was correct. Also see, M. Pelling, Cholera, Fever and English Medicine, 1825-1865, 1978, pp. 221-223.
127. Lancet, i, 1854, p. 294.
128. B.M.J., ii, 1853, 845-51.
129. LI, 25.3.1854.
130. B.M.J., ii, 1854, 840.
131. LM, 8.10.1853.
132. Ibid, 1.10.1853; ST, 24.9.1853.
133. LM, ibid.

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134. SRI, 22.10.1853. Gives details of the Royal College of Physician's recommendations. Also see; Lancet, ii, 1854, 261-2 and 266-8. For those of the G.B.H.'s Medical Council.
 135. SRI, 10.10.1853.
 136. BPP 1854-55 [1901] XLV, Report on the Results of Methods of Treatment pursued in Epidemic Cholera, by the Treatment Committee of The Medical Council, p. 1-14
 137. ibid. p. 15.
 138. Lancet, ii, 1855, 133
 139. Ibid, ii, 1854, 222 and 267. Quoting the G.B.H..
 140. Ibid, ii, 1854, 262, Gives a warning against Castor oil and other eliminatives. For warnings against purgatives also see: SRI 22.10.1853.
 141. Lancet, 1, 1855, i, 412.
 142. LI, 4.3.1854; 11.3.1854.
 143. HA, 5.10.1849.
 144. B. Foster, Public Health in Hull in the Nineteenth Century, Unpublished MPhil Thesis, University of Hull, 1979, pp. 304-306.
 145. Braithwaite's Retrospective of Medicine, 1851, XXIII, pp. 438-442. Ayre was supported by, amongst others, Dr Wilson of Sheffield.
 146. HA, 23.9.1854. This was brought to light in a letter signed by over twenty medical men.
 147. Ibid, 30.9.1854.
 148. SFP, 2.9.1854.
 149. Sheffield Homoeopathic Lancet, (SHL) No.14, 1.10.1854.
 150. Ibid, p. 14.
 151. S. Eadon, Cholera, Its Treatment at the Present Crisis; A Letter Written at the Request of the Health Committee of the Borough of Sheffield, 1854.
 152. D. Quinn, 'The Prevention and Cure of Cholera', SHL, No.4, 1.11.1853.
 153. See for example, G.C. Holland, The Management of the Bowels in Health and Disease Physiologically Considered, 1854, p. 12. SHL, No.4, 1.11.1853; No.14, 1.10.1854.

Also see BO, 4.8.1854. All the above provide details of the ingredients of homoeopathic treatments and medicines.

154. F.D. Horner, Homoeopathy, Reasons For Adopting The Rational System of Medicine, 1857, p. 40. Also see: Eadon, op cit note 151 above, pp. 1-10. Eadon states that hydropaths believed that water treatments were the most effective, but that homoeopathic treatments were superior to those offered by orthodox medical men.
155. SFP, 2.9.1854. Eadon wrote in the paper that in view of the fact that proper sanitary improvements could not be made immediately, it was vital that the public paid attention to diet and personal and domestic hygiene.
156. SHL, No.14. 1.10.1854.
157. BO, 24.8.1854. One Bradford homoeopath dissented, arguing that diarrhoea was not a premonitory symptom.
158. Anon. (By the father of a family) Ten Reasons Why I Prefer Homoeopathy, 1855.
159. A.S. Wohl, Endangered Lives, 1983, p. 65, 77 and 79.
160. See for example: J.H. Woodward and D.N. Richards, eds., Health Care and Popular Medicine in Nineteenth Century England, 1977; H. Marland, Medicine and Society in Wakefield and Huddersfield, 1780-1870, 1987; F.B. Smith, The People's Health 1830-1910, 1979.
161. Smith, op cit note 160 above, pp. 333-346. Also see, P.S. Brown, 'Herbalists and Medical Botanists in Mid-Nineteenth Century England', Medical History, 26, 1982, pp. 405-420.
162. Horner, op cit, note 154 above. Horner was forced to resign his post of Physician to Hull Infirmary after he announced his conversion to homoeopathy.
163. Smith op cit, note 160 above, p. 343. Also see: Felix Felio, Hawkers Street Dealers and Quacks - Their Dealings, Dodgings and Doings, no date, ?1860, p. 47. Felio states that Morrison was one of the most successful quacks ever, and that he was most popular in Yorkshire.
164. White's Directory of Sheffield, 1856, pp. 294-295.
165. W. Craig, A Letter In Answer To Mr.Braithwaite's Temperate Examination of Homoeopathy, 1859, p. 5.
166. White's Directory 1865, op cit, note 164 above, p. 68. For Melling's Atomopathic and Hydropathic Establishment see: M. MacLeod, Directory of Ben- Rhydding With A Chapter on The Water Cure And Homoeopathy, 1855, pp. 1-7; Marland, op cit, note 160 above, p. 231, Discusses the working classes at Harrogate.

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167. Craig, op cit, note 165 above, p. 4. states that the Homoeopathic Dispensary in Leeds was opened specifically to 'help the poor'. Also see LT, 25.3.1854; ST, 23.9.1854, for adverts for the homoeopathic treatment of cholera.
 168. Lancet, i, 1854, p. 458.
 169. See for example, LT, 24.9.1853; ST, 23.9.1854.
 170. ST, 23.9.1854 for adverts for Kaye's Diarrhoea Tablets.
 171. LT, 24.9.1853.
 172. White's Directory, op cit, note 164 above, p. 74.
 173. HA, 2.9.1854. The cure was said to 'arrest any one of these ailments in their earliest stages'.
 174. Northern Star, (NS), 10.11.1849.
 175. SFP, 2.9.1854.
 176. Ibid, 8.6.1854. It was widely recognised that a combination of river pollution, the disappearance of springs and other sources of clean water, due to mining and building, and the priority water companies gave to industrial customers, deprived the poor of a plentiful supply of clean water.
 177. Ibid.
 178. NS, 18.8.1849.
 179. BO, 22.9.1853.
 180. Ibid, 6.10.1853. Also see: SHB, Annual Reports for 1853 and 1854.
 181. LM, 11.3.1854.
 182. Ibid.
 183. SRI, 4.8.1849.
 184. The People: Their Rights and Liberties, Their Duties and Their Interests, No.41, Vol 1, 1848, pp. 320-322.
 185. SRI, 17.9.1853.
 186. SFP, 24.9.1853.
 187. U.R.Q. Henriques, Before The Welfare State: Social Administration in Early Industrial Britain, 1979, p. 147.
 188. Registrar General, op cit note 1 above, pp. 1-17.

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189. Ibid.
190. B.J. Barber, 'Aspects of Municipal Government, 1835-1914', in D. Fraser, (ed), A History of Modern Leeds, 1980, pp. 301-309. Also see, J. Hole, Light, More Light, 1863, p. 113, who argued that 'there are many miles of houses, yards and streets unconnected with the main drainage'.
191. Toft, op cit, note 30 above, p. 46.
192. Ibid, pp. 70-76. The Guardians employed a number of staff - including medical officers and nuisance inspectors - whose role was to monitor the health of the population in different districts, identify nuisances, notify nuisances to the Council, remove nuisances and provide medical aid during epidemics.
193. A summary of Braithwaite's work is given in: BPP, 1860 [2736] XXII, Second Report of the Medical Officer of the Privy Council for 1859, Appendix, pp. 133-140. For Hunter see: BPP 1866 [3645] XXXIII, Eighth Annual Report of the Medical Officer of the Privy Council for 1865, Appendix No 6, 'A Report by Dr Hunter on circumstances endangering the public health of Leeds', (Hunter), pp. 226-245.
194. Hunter, *ibid*, p. 233.
195. LM, 5.12.1865.
196. Toft, op cit, note 30 above, p. 123.
197. Bradford Council, Report of Sanitary Committee for the year ending 30.9.1864. Baths and Cemetery Sub-Committee for the municipal year 1863-1864. The Sanitary Committee did not find it necessary to whitewash any houses or construct any drains, privies or ashpits. Compared to the cholera years of 1853-54, nuisance removal work was down by over 50%. Also see: A. Elliott, 'Municipal government in Bradford in the mid-nineteenth century', in D. Fraser, ed, Municipal Reform and The Industrial City, 1982, p. 124. Elliott observes that between 1858-62 Bradford Corporation initiated only 43 prosecutions for public health offences. This compares unfavourably with Sheffield which saw over 300 in the same period.
198. W. Hudson, The Health of Bradford, 1859, p. 13.
199. Thompson, op cit, note 25 above, p. 142.
200. B. Thompson, 'Urban Mortality in Bradford', in, R.I. Woods and J.H. Woodward, eds., Urban Disease and Mortality in Nineteenth Century England, 1974, p. 126.
201. Thompson, op cit, note 24 above, p. 145.
202. *Ibid*, p. 144.

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203. Ibid, p. 141.
204. SHB, Annual Report for 1854.
205. Ibid.
206. Ibid, and Annual Report for 1855.
207. J. Salt, 'Experiments in Anarchism, 1850-1854', The Transactions of the Hunter Archaeological Society, 10, 1971-77, 44-45. Also see: SHB, Minutes for 4.10.1852. The deep drainage was sanctioned by a vestry meeting in 1852. Legally, however, the Board's duties involved carriageway repairs and surface drainage.
208. SHC, Minutes, 17.9.1855. Although the N.R.A. of 1855 had placed responsibility for dealing with nuisances with the Health Committee, neither it the Guardians nor the Improvement Commissioners had the power to effect the sort of lasting improvements envisaged by the 1848 Public Health Act. Also see: The Improvement Commissioners and Sanitation, Sheffield City Libraries Miscellaneous Papers, which describes the work undertaken by the Improvement Commission.
209. Furness, op cit, note 37 above, p. 113.
210. HSC, 10.3.1858.
211. SRI, 17.4.1858.
212. D. Fraser, Power and Authority in the Victorian City, 1979, p. 144.
213. For support see: ST, 16.10.1858. For opposition SRI 3.5.1858; ST, 9.10.1858. These contain reports of Vestry meetings.
214. Quoted in S. Pollard, A History of Labour in Sheffield, 1959, p. 15.
215. Furness, op cit, note 37 above, 118.
216. SRI, 5.2.1859.
217. G. Saunders, Town and Country: Being a Brief Sanitary Investigation into the Causes of the Differences in Death Rates in Urban and Rural Districts, 1860, pp. 23-24, Saunders did, however, take issue with the view that the working classes were to blame for the appalling conditions, arguing that if they had the means to improve things they would use them.
218. Quoted in Pollard, op cit, note 214 above, p. 15.
219. Fraser, op cit, note 212 above, p. 146.

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220. Furness, op cit, note 37 above, p. 125.
221. Fraser, op cit, note 212 above, p. 146.
222. Furness, op cit, note 37 above, p. 127.
223. Beckett, op cit, note 15 above, pp. 103-109. These included (i) giving it greater powers to deal with nuisances (the definition of which was widened to include such things as noisome trades); (ii) allowing it to introduce tighter building and planning controls; (iii) permitting it to buy land for use as cemeteries; (iv) enabling it embark upon drainage and other improvement schemes; and (v) granting it the power to finance its work through borrowing.
224. J.J. Sheahan, A History of the Town and Port of Kingston-Upon-Hull, 1866, pp. 285-287.
225. HA, 28.5.1855 and 11.12.1855. Reports claimed that the financial effects of improvements were driving tradesmen and men of wealth out of the town.
226. Sheahan, op cit, note 224 above, p.287-289.
227. E. Gillett and K. MacMahon, A History of Hull, 1980, p. 266.
228. HA, 26.5.1855.
229. Beckett, op cit, note 15 above, pp. 161-171.
230. Ibid, pp. 150-151.
231. Ibid, pp. 123-126.
232. Sheahan, op cit, note 224 above, pp. 419-422.
233. HA, 23.9.1863.

4.1 INTRODUCTION

In the early 1860s cholera yet again spread westwards out of India. Following trade routes and waterways, it reached the near east and western Mediterranean in 1865. With public and official attention in Britain fixed on more immediate concerns such as the rinderpest epidemic and the struggle for reform, cholera's presence, whilst noted by the press, did not cause undue alarm.¹ However, the Medical Department of the Privy Council feared that speedier shipping services might provide direct transfer to Britain, so in July 1865 copies of its 'General Memorandum on the Proceedings which are Advisable in Places attacked or threatened by Epidemic Disease', were sent, not to all towns, but only to ports, which were seen as the first line of defence.² Not surprisingly, the Board of Health in Hull was one of the first to be contacted.

The Privy Council's concern was well founded, a month or so later an imported case was confirmed in Southampton, carried directly from Alexandria. The first official case amongst the local population occurred in September and quickly spread elsewhere.³ Four days later cholera was diagnosed on the south coast and struck at Theydon Bois, a village in Essex, where it killed nine people.⁴ Although there were sixty cases and thirty five deaths in Southampton and a smattering of fatalities in other parts of the country, the disease did not manifest itself in an epidemic form and had petered out by the middle of November.⁵

During the winter and spring of 1866 cholera threatened again and by May had reached Hamburg and Rotterdam.⁶ This time there was greater anxiety.⁷ This was keenly felt in Hull where, at the beginning of May, a local newspaper predicted that a further visitation was now inevitable.⁸ Although the Chairman of the Sanitary Committee was able to point out that sanitary conditions were markedly better than in 1849 and 1854, and that the town now had a supply of pure drinking water, it was widely recognised that the principal threat came from the hundreds of emigrants who arrived at Hull each week.⁹

As anticipated, the first confirmed cases occurred at seaports amongst foreign seamen and emigrants. Imported cases were reported again in Southampton and in Liverpool in May and June, and at Hull and Goole at the beginning of July; the disease then spread to the indigenous population.¹⁰ By mid-July, England was said to be 'infected in many different directions'.¹¹ By the end of the year cholera had appeared in most parts of the country and had claimed the lives of 12,000 people in England.¹² The epidemic proved to be the least severe of the century, although several towns and cities, mainly ports, suffered badly; 6,000 lives were lost to the disease in London, 2,000 in Liverpool, and 500 in both Swansea and Neath.¹³ By comparison, Yorkshire escaped lightly. There were imported cases and small outbreaks, with the Registrar General's reports showing only twenty deaths in Bradford, twenty two in Leeds (including Holbeck), fourteen in Sheffield and sixteen in Hull.¹⁴ Only Goole, a small port upstream from Hull on the Humber, suffered badly with 50 deaths and a

mortality of 31 per 10,000 population, the tenth worst in England.

Although cholera's contribution to levels of mortality was small, this did not prevent it from precipitating a public health crisis. As in 1853-54, the threat of cholera jolted the local authorities in Hull, Leeds, Sheffield and Bradford into immediate action. The general thrust of official preventive schemes in these (and other) towns closely resembled those in the two previous epidemics with priority given to pre-emptive nuisance removal, sanitary cleansing schemes and arrangements for medical treatment and relief. However, there were significant changes in emphasis and detail, developments which followed changes in medical thinking on cholera's cause and mode of transmission.

4.2. CHOLERA ETIOLOGY, 1854-1866

The Privy Council's 'General Memorandum' issued in July 1865 provided the first indication of a shift in official preventive policy. Two changes were particularly significant. Firstly, in addition to urging general sanitary cleansing and nuisance removal, the Memorandum stressed the need for 'special precautions of cleanliness and disinfection ... with regard to infective discharges from the bodies of the sick'.¹⁵ In cases of cholera, it warned, this was particularly vital with matters discharged from the intestinal canal, 'Cholera evacuations should be regarded as capable of communicating an

infectious quality to ... night-soil, ... privies, drains or cesspools'.¹⁶ To destroy the infective quality of cholera dejecta, Local Boards were advised that all faecal matter should be disinfected before being thrown away. Where the disinfected faeces should be stored or disposed of was a matter of even greater importance with the Memorandum insisting that 'they must never be cast where they can run or soak into courses of drinking water'. The second change was the warning that all water supplies should be thoroughly examined to ensure that there were no leakages or infiltration from sewers, drains, privies or cesspools. When cholera, diarrhoea or typhoid fever were present, it warned, 'it is essential that no foul water should be drunk'.¹⁷

The Memorandum demonstrates for the first time the influence on official thinking of the ideas of John Snow and William Budd on the importance of the faecal-oral route and the role of contaminated water in the transmission of the disease.¹⁸ However, it would be incorrect to claim that there was a unanimous or complete change in official opinion on the questions of its cause and etiology. What they did show was that new ideas and practices were being added to the older preventive strategies, seemingly with no sense of any conflict or contradiction. In one sense this was unsurprising as an important feature of mid-century sanitary science was that it was a synthetic subject, characterised by multi-factorial theories of disease causation and all-embracing preventive measures.

As early as 1849, William Budd's microscopical work led him to assert that cholera was 'a living organism of a distinct species, which was taken by the act of swallowing it, which multiplied in the intestine'.¹⁹ Budd's findings accorded with those of John Snow, whose observations of cholera's spread in London convinced him that the most likely vehicle for infection was a water supply contaminated by the excreta of cholera patients.²⁰ Neither theory was subject to particular interest or scrutiny until 1854 when Snow succeeded in arresting a severe outbreak of cholera in Broad Street, Soho, by persuading the local authorities to lock the handle of a water pump. He followed this up by investigating the incidence of cholera in houses supplied by two different water companies. Snow's and Budd's theories prompted a revival of interest in the possibility that cholera was, in contemporary language, a 'contagious' disease. Snow proposed that the disease could be passed from person to person by way of ingestion of traces of faeces containing the cholera poison.²¹ (N.B. There was not at this time any notion of 'germs' being involved.) He contended that his model could explain, for example, why nurses and others who attended cholera patients were more likely to contract the disease than doctors. The latter, he argued, were far more likely to wash their hands than the former, a measure which considerably reduced the risk of direct ingestion. Snow's claims were taken more seriously after 1854, though they still made little impact on dominant medical and sanitary opinion.²²

In the wake of the 1853-54 epidemic, the Medical Council's Committee for Scientific Enquiries investigated the water-borne theory amongst many others, yet was unwilling to support any single explanation. With regard to the Broad Street episode, the Council reported that,

'We do not find it established that the water was contaminated in the manner alleged ... nor is there ... evidence to show whether inhabitants of the districts drinking water from that well, suffered in proportion more than the inhabitants of the district who drank from other sources'.²³

The Committee was far more impressed by ideas put forward by one of its own members, the compiler of abstracts for the Registrar General, William Farr, whose elaborate calculations of the correlation between height above sea level and the incidence of cholera led him to contend that elevation was the crucial factor in determining the severity of outbreaks.²⁴ According to Farr, there was a direct relationship between the amount of organic matter in the air, earth and water and the level or concentration of cholera 'poison' in the atmosphere, which increased at lower levels. Farr's theory was especially persuasive because it explained why the disease was so severe in low lying districts and in ports.

Following publication of Snow's, now famous, On the mode of Communication of Cholera in 1855, his theory was commented upon in the medical press. Although certain journals were less sceptical than the Medical Council, views were mixed. Some reviews, like that in the Lancet, moved towards a

qualified acceptance of parts of Snow's theory.²⁵ Others differed; the reviewer in the Medico-Chirurgical Review asserted that all Snow had achieved was to render 'the transmission of cholera by water an hypothesis worthy of inquiry'.²⁶ Morris has noted that the initial impact of Snow's theory 'has disappointed many historians who find that he made no sweeping conversions of the profession and received little attention in medical textbooks'.²⁷ F.B. Smith certainly regarded the Medical Council's dismissal of Snow and support for Farr as a lost opportunity, arguing that it 'inaugurated years of worthless speculation about the relation between the concentration of water in soil, water tables and the incidence of cholera'.²⁸ Snow's inability to identify the cholera poison in victims' stools or drinking water has been cited as the main reason for the rejection of his theory.²⁹ However, many of these comments are decidedly Whiggish. Recent studies have shown that assessments of the acceptance and diffusion of advances or innovations in medicine must take cognizance of the context of reception and diffusion, social as well as medical.³⁰ The expectation that Snow's theory could have posed a direct and immediate challenge to miasmatic orthodoxy - even if he had been able to identify the cholera 'poison' - is unrealistic.

Until recently, historians have tended to discuss the reception and impact of Snow's theory in absolute terms, speaking of 'acceptance' or 'rejection'. In the light of the cool response to Snow in the mid-1850s and the continuing dominance of the miasmatic theory in the 1860s, this has

produced pessimistic accounts and led to the notion of outright rejection. An approach which examines the response to Snow's theory contextually and abandons the search for absolutes, reveals that the situation was more complex. Working from this perspective, two very significant developments come to light. Firstly, sections of the medical establishment gradually became more amenable to the ideas embodied in Snow's water-borne thesis and to the existence of specific contagia more generally. Secondly, the parameters of the miasmatic doctrine were adapted 'to accommodate the structures of Snow's innovations'.³¹ Before exploring these developments in greater detail, it is necessary to outline why Snow's theory was coolly received in the mid-1850s.

In the main, opposition to Snow centred around the fact that his theory was highly specific. In arguing that cholera could only be contracted through ingestion of material contaminated by the faeces of cholera victims and usually diffused through drinking water, Snow was advancing what was essentially a single cause explanation.³² This ran against the orthodox miasmatic notion of multiple or aggregate causation which, according to an editorial in the B.M.J. in 1853, was 'the common opinion'.³³ Snow's belief that the cholera poison was spread through drinking water and entered the body by way of the mouth was equally controversial as it went against the widely held view of transmission through the atmosphere and entry via the lungs. In 1855 a report in the Medico-Chirurgical Review summarised contemporary opinion by citing Snow's insistence 'that cholera is always communicated

by means of water' [emphasis added] as a principal reason for rejecting his theory.³⁴

The debates which accompanied Snow's promotion of the water-borne theory reveal that more was at stake than the validity of a particular theory or set of theories. In challenging miasmatic orthodoxy, Snow was questioning the theoretical rationale for sanitary improvement and reform. Sanitarian's disease models were 'inclusive' and held that all forms of filth and environmental pollution contributed to the generation of disease. It followed that the incidence of cholera and other diseases could only be reduced by comprehensive improvements. Snow, by contrast, excluded the role of general filth from his explanation by pointing to highly specific filth. Logically, therefore, he believed that future epidemics could be contained by the implementation of a limited and carefully targeted preventive strategy.³⁵ This enabled Snow to be portrayed as an opponent of sanitary reform.³⁶

Whether this was entirely fair is questionable. Whilst Snow did argue that cholera outbreaks could be averted by specific forms of preventive action - such as the disinfection of patients' stools, the thorough cleansing and destruction of their clothes and bedding and, above all, by ensuring that choleric discharges were not allowed to contaminate supplies of drinking water - he also advocated general sanitary improvements.³⁷ What distinguished him from the majority of his contemporaries was the question of timing and his stress

on water. For Snow, general sanitary measures should give way to specific measures when cholera was present. In a lecture he delivered to the Epidemiological Society shortly before his death in 1858, he argued that the absence of drainage and sewerage 'were injurious to health only by the contamination they caused to pumps, wells and other water supplies'. Similarly, he attacked certain sanitary 'improvements', such as the provision of water closets and the construction of drainage systems, on the grounds that they wasted water and, by adding to river pollution, increased the risk of drinking water becoming contaminated.³⁸

The lukewarm response to Snow demonstrates why historians have tended to argue that the water-borne theory was firmly rejected. On closer inspection, however, it is apparent that despite widespread scepticism amongst the profession, Snow's theory was more influential than the above suggests. This point is illustrated by the way in which Snow helped to stimulate interest in water's role in facilitating the spread of cholera and other diseases. In the 1860s, Snow's ideas increasingly went with the grain of the emergent germ theories of diseases and interest in the agents and routes of disease transmission.³⁹

The idea of a causal connection between polluted water and the incidence of disease was well established by the 1850s and did not originate with Snow.⁴⁰ Concern over this issue had been sufficiently deep for Parliament to legislate in 1852 to provide London with a purer supply; a measure which

actually provided Snow with the opportunity to conduct his investigation into the incidence of cholera in areas supplied by different water companies in London.⁴¹ Snow's ideas gave impetus to the process by which water was integrated into miasmatic explanations of cholera's mode of diffusion.⁴²

The Medical Council's Committee in 1854-55 did not rule out the possibility that polluted water had contributed to the severity of the epidemic. It was conceded that water from the Broad Street pump might have contributed to the severity of the Soho outbreak by virtue of 'the fact of its impure waters having participated in the atmospheric infection of the district'.⁴³ As mentioned previously, the Committee approved William Farr's theory which stressed that elevation was the crucial factor. Farr, however, actually revised his own theory to accommodate Snow's ideas.⁴⁴ He contended that where cholera was most fatal, the cholera poison (cholerine) 'is largely diffused through water, as well as through other channels'.⁴⁵ Unlike Snow, however, Farr developed a miasmatic explanation of this phenomenon, arguing that polluted or contaminated water was most likely to spread the disease when it evaporated into the atmosphere from drains, ditches and rivers.

William Budd also developed a theory which incorporated the main strands of Snow's argument and was again less exclusive. Budd agreed that cholera discharges were infective and was certain that the disease could be contracted through ingestion of faecal matter. Moreover, by the late 1850s he

was arguing that typhoid was transmitted in an identical fashion.⁴⁶ However, Budd differed from Snow in that he did not exclude the air-lung route of transmission. With regard to cholera, he maintained that patients' discharges invariably contained the cholera poison and that this could be transmitted in several ways: direct ingestion; or after finding its way into drains and sewers from which it could 'exhale into the air, or percolate into drinking water'.⁴⁷ Budd's ideas were more congenial to sanitarians, though his pursuit of the 'smallpox analogy' distanced him from (ultra) sanitarians.⁴⁸ Certain characteristics commonly associated with smallpox (a disease which was widely accepted to be contagious) Budd associated with typhoid and cholera.⁴⁹ Put simply, he argued that the excretions of typhoid and cholera patients were products of the disease and therefore contained the disease agent itself, in much the same way that the pustules of smallpox victims contained the smallpox poison.

After Snow's death in 1858, Budd continued to promote the idea that cholera, like typhoid, could be communicated from one individual to another. Additionally, he sought to resolve some of the confusion inherent in contemporary nomenclature. In particular, he attempted to overcome the problems which arose from the habit of using words like 'infectious' and 'contagious' interchangeably by expanding the definition of 'contagiousness' to include various modes of propagation.⁵⁰ On this basis a disease like cholera, which, according to Budd, could be transmitted directly or indirectly became 'catching' or contagious.

Pelling has argued that one of the main achievements of the 1850s was the narrowing down of 'Chadwick's large indictment of all filth to one kind in particular: that produced by human beings'.⁵¹ The notion that a specific form of filth assisted the spread of diseases like cholera and typhoid, was assimilated into miasmatic doctrine with relative ease.⁵² Particularly influential in the 1860s was the German scientist, Max von Pettenkofer. While he shared Snow's and Budd's view that patients' evacuations contained the cholera poison, he argued that for the poison to produce the disease, it had to react with certain local accessory causes in the soil. This process, he argued, generated a miasma which, if inhaled, excited the disease in individuals. For Pettenkofer, the two 'indispensable conditions' which influenced cholera's propagation were 'human intercourse yielding the germ ... and the soil developing this germ into activity'.⁵³ Because the production of cholera was dependent upon a reaction between the two, he held that cholera could be transmitted from one locality to another but not directly from one person to another, except via the soil.⁵⁴ As such, he opposed the arguments of Snow and Budd that cholera was a communicable disease.

Between 1858 and 1866 a number of key figures in the medical establishment and several medical journals became more amenable to various strands of Snow's theory. Amongst the most important was John Simon, Medical Officer to the Privy Council. In the mid 1850s, Simon's strong belief in the

atmospheric theory had led him to reject Snow.⁵⁵ According to Lambert, Simon first 'moved towards acceptance of Snow's theories on the transmissibility of cholera in water fouled by the discharges of the sick' in 1856.⁵⁶ This 'conversion' gained momentum following his acceptance of Budd's claim that typhoid was spread by excrement-tainted water and, by 1860, he had publicly stated that cholera was transmitted in an identical manner.⁵⁷ The advice offered in 1865-66 provides the clearest indication that Simon and his colleagues at the Medical Department accepted the major tenets of the water-borne theory. In 1865 Simon supported Dr Netten Radcliffe's claim that the Theydon Bois outbreak was attributable to human excrement having found its way into drinking water.⁵⁸ It should be stressed that even Simon's conversion to Snow was not total, for as Pelling has pointed out, he 'never entirely accepted the exclusiveness of Snow's position'.⁵⁹ Wider medical opinion also became less hostile. An editorial in the Lancet in 1866 said that, Snow's work had demonstrated that water contaminated by the faeces of cholera victims 'could operate as a means of extending the spread of cholera' and that his researches had been 'masterly' and 'classical'.⁶⁰ It went on to recommend that traditional methods of control be supplemented by the disinfection of victims' discharges and supervision of water supplies.⁶¹ Bill Luckin has argued that the majority of medical men were still sceptical about Snow's theory in 1866.⁶² Even so, there was not a single alternative theory, rather miasmatic ideas were all-embracing and subject of continual refinement and revision.⁶³

Much was written in the lay press about Snow's work and particularly the Broad Street pump episode.⁶⁴ (See FIGURE 4.1) Whilst the Times declared that 'it is well known that the cholera poison comes from the ejecta and vomit of cholera patients' indicating a strong degree of support for Snow, other lay publications were more cautious.⁶⁵ The Bradford Review, for example, took the miasmatist line that bad water merely provoked cholera.⁶⁶

However, whilst there was a variety and diversity of theories, there was general agreement on actions. Simon's 'new' preventive measures did not contradict traditional sanitary practices, they augmented them. The main additional measure was the disinfection of cholera faeces and other contaminated materials. Many miasmatists endorsed this course of action, if for different reasons. During previous epidemics they had called for the removal of the preventable causes of the disease through sanitary cleansing and nuisance removal operations or, failing this, neutralising miasmas through disinfection and deodorization. By 1865-66, however, most miasmatists were convinced that whilst all filth still contributed to the generation and propagation of cholera, human excrement was the most dangerous form and the most likely to yield the disease and, particularly when it became airborne, to spread it. Removing or disinfecting human faeces, therefore, was seen as an extension of the sort of cleansing operation seen in 1848-49 and 1853-54.

Disinfection and attempts to procure supplies of pure drinking water served to widen the focus of sanitary prevention. Ostensibly, the third addition to the official preventive strategy devised by Simon - the medical inspection of ships, foreign sailors and emigrants - did not. This measure was consistent with the view that cholera could be communicated from person to person, a stance which might have provoked miasmatisers, traders and other interests had the authorities actually attempted to re-introduce quarantine, rather than just inspection. Although many emigrants affected by cholera travelled on overcrowded and insanitary ships, and this was considered 'a most favourable arrangement to the spread of cholera', few medical men accepted that the disease was anything like smallpox.⁶⁷ It was not people who were dangerous, it was their wastes and their environmental impact. Thus, if all seamen and emigrants were inspected prior to disembarkation and 'suspicious' cases identified, isolated and hygienically managed, there would be no chance of cholera spreading. Understandably, these measures were taken very seriously in Britain's third largest seaport in 1866 - Hull.

4.3. HULL

When the Medical Department of the Privy Council first wrote to the Local Board of Health (L.B.H.) in July 1865, it felt that the situation was not yet sufficiently worrying to warrant putting the N.R.D.P.A. into force. Instead, it circulated its 'General Memorandum' and urged local

authorities to take 'such measures as they think proper for the preservation of health' under ordinary nuisance removal provision.⁶⁸

The town experienced a brief cholera scare in September 1865 following reports that a seaman from Russia was suffering from the disease. Although medical men subsequently diagnosed the case to be one of typhoid, this incident led to some action. The L.B.H. wrote to the Privy Council requesting it to put the N.R.D.P.A. into force so that extraordinary precautions could commence.⁶⁹ The Privy Council declined, though after the outbreak in Southampton in August, it did send a Medical Inspector, Dr Hunter, to Hull inspect the lodging Houses frequented by foreign emigrants and seamen.⁷⁰ In the view of the local press and the L.B.H., it was imperative that special powers should be granted because of the emigrant problem, or argued the Herald, 'the introduction of the disease (was) almost inevitable'.⁷¹

The situation had serious implications for other towns. Concern mounted in Liverpool because the majority of emigrants who landed at Hull travelled across the Pennines to board trans-Atlantic ships. Fearing that cholera would accompany emigrants, the Mayor of Liverpool wrote to the Hull Board of Health in 1866 imploring them 'as far as possible ... to prevent the landing of German emigrants without the most careful examination so as to prevent the introduction of cholera from infected places on the continent'.⁷² With imported cases of cholera occurring at several British ports

in April, demands for rigorous medical checks on emigrants increased.⁷³ The Privy Council responded to what was increasingly seen as a crisis by issuing an Order in Council on 7 May to put the N.R.D.P.A. into force, though as noted early, this was only in British ports.⁷⁴

The legislation required a number of precautions. When a ship arrived from an infected port, all passengers and crew members had to be inspected by qualified medical men and certified healthy before being granted permission to disembark. In the event of cholera cases being discovered the ship was to be placed under quarantine for a period of three days during which time contact with the shore was forbidden. If fatalities had already occurred on the ship, the deceased were to be interred at sea and their clothes, bedding and personal effects destroyed or disinfected. Cholera patients, however, were to be brought ashore and treated in cholera hospitals provided and equipped by the local authorities. Patients were not permitted to leave hospital until certified healthy by a medical man.⁷⁵

Hull's L.B.H. complied with the Order in Council immediately. Within days a number of medical men had been employed to undertake inspections and arrangements had been made to use premises at the Citadel Ground as a cholera hospital.⁷⁶ On its own initiative, the Board took a number of additional precautionary steps. Mindful perhaps that even the most rigorous system could fail, two members of the Sanitary Committee and the Port Immigration Officer called upon the

Passenger Superintendent of the North Eastern Railway Company to discuss how emigrants could be prevented from 'passage through the town' and contact with local people.⁷⁷ It was decided to land emigrants as close to the railway station as possible and accommodate them in tents in a confined area until numbers warranted the provision of a special train to Liverpool.

The nature of the response in Hull shows that there was a now widespread belief that cholera was a communicable disease; that the healthy could contract the disease through contact with cholera sufferers and items soiled by their excreta.⁷⁸ This view was shared by the local press who had joined with the L.B.H. in calling for the implementation of the N.R.D.P.A. and, after it had been put into force, continued to argue that the inspection of emigrants must remain the Board's highest priority in order to prevent cholera from putting down 'its first roots in the town'.⁷⁹

Whilst inspection, isolation and the management of emigrants were the Board's main priorities, preventive action went ahead on the usual fronts. Nuisance removal, the disinfection of sewers, drains, privies, gullies and waterways and general sanitary cleansing operations were stepped up in a bid to ensure that if cholera did spread from emigrants or seamen to local people, it would not find conditions to its liking. That the L.B.H. appointed over sixty temporary cleansing operatives is a measure of its determination.⁸⁰ Arrangements were also made whereby if cholera did gain a

foothold, a system of medical relief closely resembling that seen in 1854 could be put into operation. Again, this was to be geared towards the earliest possible detection and treatment of premonitory symptoms.

The precautions taken by the L.B.H., and especially the arrangements for dealing with imported cases, show that the great store was set by the 'new' measures devised by Simon. It might seem anomalous, therefore, that with the exception of disinfecting watercourses, sewers and drains, relatively little was said or done about Hull's water supply. This seems especially puzzling as there was now a broad consensus of opinion in the town that polluted water - 'a bad mixture of sewage and muddy salt water' as the Advertiser put it - had been responsible for the severity of the 1849 epidemic.⁸¹ The explanation for this was that concern was forestalled because of the new supply arrangements for domestic and industrial consumption, where water was now drawn from underground springs at nearby Springhead and pumped to the town.⁸² Reports stated that the town now had 'possession of an abundance of water of the purest quality [so that people] need have no fear that the cholera will commit any serious ravages'.⁸³

The L.B.H. was applauded locally for the manner in which it responded to the threat of cholera in 1865-66, Hull was in fact one of the few large ports to escape an epidemic. However, and in sharp contrast to earlier years, central government's handling of the crisis led to considerable

disquiet in the town. The Privy Council was criticised repeatedly for delaying implementation of the N.R.D.P.A. until May 1866 and delaying extension to the whole country.⁸⁴ This also led to a muddle whereby under the first Order in Council the L.B.H. was constituted the local authority with responsibility for the Act, but the second Order appeared to transfer responsibility for preventive measures to the town's two Boards of Guardians.⁸⁵ Matters were further complicated because under the terms of the new Sanitary Act, 1866, the L.B.H. was constituted the nuisance authority and therefore seemed to share responsibility for sanitary and cleansing measures with the Guardians. As things stood it was unclear which agency should supervise the medical inspection of shipping and emigrants. Fearing that the manifold confusion would lead to the neglect of vital work, the L.B.H., Guardians and local press agreed to seek clarification.⁸⁶ It seems that a satisfactory solution to these problems was not found as 'jurisdictional confusion continued'.⁸⁷ Fortunately for the people of Hull the absence of an epidemic meant certain features of the local arrangements were not tested.

The anti-cholera strategy in 1866 showed two interesting changes. First, there is clear evidence that for the first time since 1831, an appreciation that cholera was almost certain to make its first appearance at a seaport led the Privy Council to adopt a two-tier strategy of prevention in which ports were targeted for precautionary action before inland towns. The measures then recommended for adoption reveal the second change, namely, the belief that cholera was

likely to be spread by human agency led to people and their wastes not the environment becoming the focus of sanitary policing. Although traditional sanitary preventive measures were implemented with great vigour, there is little doubt that the main thrust in Hull was an attempt to minimise the danger posed by foreign seamen and emigrants.

Prior to the administrative crisis of mid-August, the activities of the L.B.H. and the safety of the town's water undoubtedly contributed to the creation of a mood of confidence in the town. Reports of cases at nearby Goole and even in Hull itself did not lead to undue alarm.⁸⁸ The available evidence suggests that faith in the preventive measures adopted by the Board may well have been justified. Medical inspection of emigrants and efforts to keep them apart from townspeople certainly looked to have been successful. Indeed, details of those cases which occurred in Hull, supplied by the local registrar shows only one 'imported' case was reported in the town itself and that others occurred amongst those visited by people who had been in close contact with sufferers in other parts of the country.⁸⁹

The arrangements for coping with the threat posed by infected emigrants may have afforded the people of Hull a considerable degree of protection, however, as a means of preventing cholera's entering Britain they may have been less successful. Reports from Liverpool in May 1866 showed cholera having broken out amongst emigrants who had travelled from Germany via Hull; medical inspection at the Humber port may

not have been as successful as the segregation measures.⁹⁰ This news was viewed with deep concern across the Atlantic. Indeed, the mayor of New York wrote to his counterpart in Hull demanding to know what precautions had been taken there and if the town still enjoyed immunity.⁹¹

Having been introduced to Britain by emigrants, cholera spread to the indigenous population. Isolated cases were reported in various parts of the country at the end of June and in the West Riding at the beginning of July.⁹² Under the terms of the N.R.D.P.A. boards of health, town councils and Poor Law Guardians were formally charged implementing preventive measures. For its part, the Privy Council, like the General Board of Health in 1848-49 and 1853-54, acted in an advisory capacity, informing local authorities of their responsibilities and making recommendations about how the provisions of the Act should be implemented.

4.4 LEEDS

Coming less than a year after the public health crisis of 1865, the renewed threat of cholera in 1866 promised to reveal whether or not the Town Council had responded positively to the barrage of criticism levelled against it following the publication of Dr. Hunter's Report. Whilst the passage of the Leeds Improvement Bill, 1866 certainly suggested that the Council had developed a commitment to public health, the new

threat provided a timely opportunity to see if lessons really had been learnt.⁹³

The appointment of Major Kirkby Robinson as Medical Officer of Health (M.O.H.) in the spring of 1866 was hoped by reformers to be signal a new attitude.⁹⁴ He was to have an important bearing on the attempt to avert cholera as the Council was advised to take a number of precautions before the N.R.D.P.A. was put into force.⁹⁵ In July 1866 the Guardians were somewhat surprised to learn that they, rather than the Council, were still responsible for the emergency measures.⁹⁶ Whilst the Council retained responsibility for ordinary nuisance removal operations, it fell to the Guardians to provide all forms of medical relief, treatment and facilities; to instigate house-to-house visitation; and to ensure the speedy burial of the dead.⁹⁷ Immediately, they formed a special committee and met with the Council to discuss coordinated action.⁹⁸ With regard to the latter, it was agreed that house-to-house visitors and other officers employed by the Guardians should identify nuisances and report them to the Council's Scavenging and Nuisance Committee. In a further gesture of mutual assistance, the M.O.H. volunteered his expertise to the Guardians.⁹⁹

At the beginning of August the Guardians' Disease Prevention Committee began to put its preventive machinery into operation with apparently exemplary results. The town was divided into four medical districts, each of which was placed under the charge of a Medical Officer, aided by four

specially recruited medical assistants.¹⁰⁰ The latter were employed primarily for the purpose of conducting house-to-house visitation, which again involved identifying and reporting nuisances and issuing advice on matters of hygiene, diet and sanitation as well as checking the health of local people and prescribing medicines where necessary.¹⁰¹ The Guardians also decided to equip and use the Old Grantham Street Workhouse as a cholera hospital and to apply to the War Office for permission to use the Cavalry Barracks as a Sanatorium. Several nurses and nursing assistants were employed and steps were taken to procure additional premises in each medical district for additional accommodation if needed.¹⁰²

Special emphasis was placed on house-to-house visitation which, in the view of the Leeds Mercury, was 'the only effectual mode of battling with cholera yet discovered'.¹⁰³ Visitation commenced on 6 August and was undertaken with immense vigour. Within three days, 800 houses had been visited, 59 cases of diarrhoea and five of choleric diarrhoea had been discovered, and many houses ordered to be whitewashed. As the M.O.H. had hoped, visitation also led to the identification and removal of a variety of nuisances. For example, in the three week period up to 25 August, the four medical officers ordered 861 houses to be cleansed and whitewashed, some by the owners, others by cleansing operatives. Between 1 August and 1 December, the Guardians' two sanitary inspectors reported a total of 1,538 nuisances: of these, 852 were removed or abated, 239 specially noticed

(139 of these were subsequently removed), and 347 referred to the Council's Scavenging and Nuisance Committee.¹⁰⁴

Visitation had been conducted so comprehensively that by the week ending 1 September virtually every house in the Leeds Township had reportedly been inspected.

TABLE 4.1

HOUSE-TO-HOUSE VISITATION IN LEEDS 4 AUGUST - 1 SEPTEMBER 1866

WEEK ENDING	HOUSES VISITED	DIARRHOEA CASES DISCOVERED
11 AUGUST	5,469	227
18 AUGUST	4,541	132
25 AUGUST	3,472	226
1 SEPTEMBER	3,823	237
TOTAL	17,305	822

Source: Leeds Mercury, 16.8.1866; 21.8.1866; 30.8.1866; 6.9.1866.

At the end of the year, the Guardians reflected that visitation, cleansing and nuisance removal had been conducted so thoroughly that 'a great amount of sickness has been averted which in all probability would have existed had it not been for the prompt and energetic steps taken..¹⁰⁵

As had been the case in both 1848-49 and 1853-54, there was no shortage of advice to the public, official and otherwise; house-to-house visitors, local newspapers and

leaflets instructed on familiar themes: domestic cleanliness, personal hygiene, diet, temperance and the need to seek prompt treatment for diarrhoea. The Leeds Times, for example, urged 'care and prudence' in diet and bodily and domestic hygiene; the Mercury offered guidance to the working class, whose neglect of domestic and personal hygiene, wholesome food and a sober lifestyle was 'proverbial'.¹⁰⁶ More unusual hints on prevention were supplied by members of the public through the correspondence columns of local newspapers. For instance, 'Carbon' wrote to the Mercury to implore nurses, medical men and others who attended cholera patients to wear charcoal respirators which would, he promised, 'absorb deleterious gases and render them harmless'.¹⁰⁷ The Leeds Sanitary Association produced the novel suggestion that people should keep their feet dry.¹⁰⁸

Dr Robinson had been particularly concerned about the sanitary dangers posed by 'swine colonies' in the town and, by the beginning of August, had issued over five hundred notices demanding that pigs and pigsties be removed from the vicinity of dwelling houses.¹⁰⁹ This form of action provoked an angry response from pig-owners who were 'determined to defend their interests against the encroachment of sanitary science'.¹¹⁰ Meetings were held across the town for the purpose of establishing a Working Men's Pig Protection Society, which aimed to prevent the confiscation of pigs which were kept in a 'clean and wholesome state', or failing this, to pressurise the Council into compensating owners whose stock was removed. The practice of keeping pigs was defended in a letter

published in the Mercury, which stated that pigs were a 'positive benefit to the community' as they were effective scavengers which 'set a good example'.¹¹¹ Although the formation of the Pig Protection Society reflected deep anger about sanitary operations and provides an indication of how unused the public were to comprehensive cleansing, its effects appear to have been limited as styes were removed without hindrance.

The preventive system put into force in 1866 resembled that seen in 1853-54. Identical administrative arrangements were made and similar medical and sanitary precautions taken, but there were significant changes at the margin. The danger posed by polluted drinking water was recognised as one amongst many dangers. Dr Hunter had been highly critical of Leeds' drinking water in 1865 because it was still drawn from the River Wharfe and, despite filtration, was badly polluted by discharges from factories.¹¹² Such worries prompted the Waterworks Committee to seek alternative sources, yet by 1866 it had been possible to make hardly any changes. Consequently, frequent warnings about the dangers of foul or tainted water were issued. The message was unequivocal, no-one should 'drink water which has not been boiled and filtered'.¹¹³ Equally blunt advice was offered about the necessity of disinfection. The Leeds Sanitary Association warned that,

'If anyone in the house has cholera, put chloride of lime onto what comes from them every time they have a motion, or if they throw up, then take it at once to the midden.

Don't keep it in the house at all - nothing will be more likely to make the rest ill'.¹¹⁴

It also insisted that clothes and bedding worn or soiled by cholera patients should be washed immediately. Further advice on the dangers posed by faeces and the need for disinfection was provided for local employers who were urged: (i) to ensure that privies and channels in factories and workplaces were kept clean and treated with disinfectants; (ii) to keep supplies of medicine on their premises; and (iii) to send home any employee who had persistent symptoms. Perhaps most important of all, employers were instructed to ensure that if anyone at work defaecated or vomited on the floor or elsewhere, the dejecta were to be covered in chloride of lime before removing it.

When cholera cases were diagnosed in late August, special arrangements were made to cleanse and disinfect the homes of the sick, whilst general sanitary measures went ahead uninterrupted in other districts. Great importance had been attached to cleansing the homes of the sick in previous epidemics, but in 1866 the Guardians' medical inspectors had special instructions that 'excreta [had] to be immediately disinfected' and that privies, gullies, sewers into which infected faeces might have been deposited were to be thoroughly disinfected.¹¹⁵ Steps were also taken to prevent members of the public entering the homes of the sick until disinfection and whitewashing operations had been completed.¹¹⁶ Robinson also visited every house where cholera

had been diagnosed to ensure that soiled bedding, linen and clothes was burnt.¹¹⁷

The handful of cholera cases and deaths in the summer of 1866 meant that the measures for treating and caring for the sick were not used.¹¹⁸ Nevertheless, on the basis of the arrangements which had been made, it is quite apparent that there had been an important shift in policy and that patients would have been treated in cholera hospitals rather than at home. In 1848-49 and 1853-54 the G.B.H. had recommended that cholera cases be treated at home and that relatives and others be removed from epidemic influences. Thus, just as priority was to be given to removing cholera faeces from the environment, great importance was attached to removing cholera patients from the community. The Leeds Times argued that 'there is no doubt about the wisdom of establishing cholera hospitals' because on the one hand, they promoted the patient's recovery and, on the other, they 'cut off contagion by isolating them from the uninfected portion of the community'.¹¹⁹ Whether or not the cholera hospital in Leeds was actually used is unclear; that healthy people were removed from infected houses to the Sanatorium House of Refuge suggests that it might have been.¹²⁰

4.5 BRADFORD

As in the other towns the Bradford Guardians were notified in July 1866 of the Privy Council's decision to

invoke the N.R.D.P.A. The Town Council and Guardians had already discussed in June cholera's approach and what strategy to follow.¹²¹ At the suggestion of the Mayor, they had already applied jointly to the War Office for permission to use the barracks on Bradford Moor as a Cholera Hospital.¹²² In July, the Guardians received a visit from Mr Corbett of the Poor Law Board who explained how the Act should be put into force and outlined their responsibilities.¹²³ Untypically, the Guardians decided to follow the Medical Department's advice to the letter, though as in Leeds new measures were not given any priority. At a specially convened meeting they voted: to divide the Union into seven districts for the purpose of visitation; to appoint a number of medical officers or Guardians to oversee and co-ordinate visitation in each district; and to employ a respected local medical man, Dr Macturk, as Medical Adviser.¹²⁴ Two days later preparations were made for the erection of a temporary cholera hospital, the acquisition of premises suitable for use as a sanatorium, and the recruitment of nurses for both establishments. Additionally, a quantity of carbolic acid was bought for disinfection and notices posted in all the town's common lodging houses informing inmates of the need to consult a medical officer on the first sign of diarrhoea or other bowel complaints.

On hearing of the steps taken by the Guardians, the Council met to discuss their own duties as the L.B.H.¹²⁵ The Mayor explained to his colleagues that although the Guardians were responsible for implementing the N.R.D.P.A., the Council

was still obliged to carry out nuisance removal and general cleansing. Even though the meeting was informed that the public health in Bradford was 'never more satisfactory', the Council, perhaps mindful that cholera had already been reported in nearby Batley and Dewsbury, voted to step up sanitary operations. Councillors, acting as district visitors for their respective wards, undertook a sanitary inspection of the town and reported nuisances to the Sanitary Committee.¹²⁶ Meanwhile, the Sanitary Committee authorised the Town Surveyor and his staff to take immediate action to disinfect all the waterways, grates, drains and ashpits in the Borough.¹²⁷

The authorities' willingness to act swiftly and comprehensively was welcomed by the local press. At the beginning of August, The Observer praised the vigorous cooperation between the two authorities which, it believed, was facilitating the speedy removal 'of nuisances and every visible cause of disease', whilst the Bradford Review applauded their 'active stirring in preparation for the unwelcome visitor'.¹²⁸ As usual when cholera threatened, the public was reminded of the need to support and follow official preventive efforts. Allowing for the fact that the 'absolute prevention and extirpation of cholera [required] order to be taken in India and Turkey', both Bradford's newspapers devoted space to detailing requirements of personal and domestic hygiene, sanitary vigilance, attention to diet, the needs for moderate and temperate habits, and early treatment of bowel complaints.¹²⁹ The only mention of water supply was the

familiar advice to shun foul or contaminated drinking which the Review told its readers was 'a promoter of cholera'.¹³⁰

Most of the advice provided by the newspapers was pitched at the working class and again extolled the virtues of cleanliness and temperance. The Bradford Observer complained that the term 'cleanliness' was interpreted too narrowly by the majority of Bradford's.¹³¹ Moral cleanliness, it argued, was of equal importance to physical cleanliness, therefore, sobriety and moderation in all aspects of life were regarded as vital preventives. In this context, particular concern was expressed about the drinking habits of Bradford's operatives, with the Observer reminding the public that avoidance of excessive drinking at weekends had brought a salutary effect during the 1849 epidemic.¹³² Interestingly, middle class activities and traits were also attacked, irresponsible and avaricious landlords were the target of particular criticism. It was disgraceful, contended the Observer that in a town, 'with its copious streams brought to everyone's door', many poor people were 'condemned by their landlords to buy water by the bucket' whilst 'others still depend on wells'.¹³³ More unusually, the Observer noted a certain reluctance on the part of sections of the town's middle class to co-operate with medical visitors and sanitary inspectors. The paper warned that the group most likely to object to visitation - the lower middle class - were also likely to eschew calls for cleansing and sanitary vigilance in and around the home. There existed in Bradford, it claimed, 'a most dangerous class of wives - those who consider themselves ladies, but want the means - too

proud to swill and clean, and too poor to keep servants to do these common but necessary things for them'.¹³⁴

Pleas for sanitary vigilance took on an added urgency at the beginning of August when a case of cholera was diagnosed. On 4 August, Dr Bell reported that Mrs Cumming of Tetley Row was suffering from symptoms which were unmistakably those of Asiatic Cholera.¹³⁵ The news prompted the Guardians to take additional precautions. On the sanitary side, the stricken house was disinfected repeatedly, visitation stepped up in the vicinity of Tetley Row and a variety of nuisances were reported to the Sanitary Committee.¹³⁶ Special arrangements were also made, 'for the purpose of securing all proper attention for Mrs Cumming'.¹³⁷

It might seem anomalous that at a time when there was a broad consensus in favour of the use of cholera hospitals, Mrs Cumming and subsequent cholera patients were treated at home. This was not due to local rejection of contagionist ideas, indeed, the reverse. The authorities could not find suitable hospital premises because of objections by residents near all the possible sites. The application to the War Office for use of the Barracks was unsuccessful and consequently, when the first case was reported Bradford was still without isolation facilities. At the beginning of August the Guardians were left with no alternative but to build temporary accommodation in the workhouse grounds.¹³⁸ A temporary wooden shelter was erected although seemingly never used.¹³⁹ All the cases which were notified to the Guardians, including five fatal ones at

Warwick Street, were treated at home by Medical Officers and specially recruited nurses.¹⁴⁰

Whilst the Guardians devoted much time to caring for the sick and cleansing infected houses, they were also busy in other areas. Visitation, which enabled them to keep a check on the incidence of diarrhoea, to prescribe medicines where necessary, to issue advice to the public and to identify nuisances, was conducted thoroughly throughout August and September. The Council's Sanitary Committee was no less active, responding to complaints of nuisances from the public, the Guardians and their own visiting teams.

TABLE 4.2.

NUMBER OF NUISANCES REMOVED BY THE SANITARY COMMITTEE IN THE YEARS 1865, 1866 AND 1867.

NUISANCE/ACTIVITY.	NUMBERS REMOVED IN YEARS ENDING		
	30.9.1865	30.9.1866.	30.9.1867.
Drains cleaned or opened	128	232	242
Privies, Ashpits repaired/drained	42	207	451
Accumulations of filth removed	13	94	99
Pigsties removed	8	53	139
Houses Whitewashed	0	109	50

Source: Bradford, Reports of the Sanitary Committee of the Town Council for year ending 30.9.1865; 30.9.1866; 30.9.1867.

Throughout the summer the Committee's workload increased substantially as its employees tackled a variety of nuisances including accumulations of filth, pigsties, overflowing privies, open ditches and filthy houses.¹⁴¹ The increased level of sanitary activity in the summer of 1866 did not go unnoticed, nor did the fact that it was quickly scaled down when the threat passed (See TABLE 4.2.).¹⁴²

4.6 SHEFFIELD

Cholera's return to Britain in the mid-1860s coincided with a period of rapid change in Sheffield's public health arrangements. With the adoption of the Local Government Act in 1864, the Highway Boards and Improvement Commission were abolished and their duties transferred to the Council, which was designated the L.B.H.¹⁴³ This restructuring brought hopes of a significant improvement in the standard of the town's public health.¹⁴⁴

In the two years after its inauguration, the L.B.H. embarked upon a modest programme of improvement, passing by-laws to tighten up building and planning regulations in 1864, slaughterhouses in 1865 and nuisance removal in 1866.¹⁴⁵ More importantly perhaps, an ambitious plan for the main drainage of the town was mooted in 1865 and approved by the Council a year later.¹⁴⁶ Although the level of sanitary activity had increased markedly since 1864, concern about sanitary

conditions began to mount once again in 1865 with the news that cholera was again spreading.

During the summer of 1865 the appearance of a number of reports in the local newspapers charting cholera's progress in the Middle East did not at first lead to particular concern. When the Privy Council contacted Sheffield Town Council in August to warn it that cholera was approaching, the majority of Councillors rejected calls for immediate action. Isaac Ironside, for example, scoffed at 'the most solemn and ancient Privy Council' because it took 'notice of the gossip of newspapers'.¹⁴⁷ A later communication from the L.G.B., which warned that cholera was moving ever closer to Britain and urged the Council to take 'steps for the preservation of health', was taken far more seriously. Mindful of reports from Southampton, the Council voted to allow the Cleansing Committee an annual budget of £3,150 for carrying out the provisions of the N.R.D.P.A.¹⁴⁸

Predictably, there was no shortage of advice for the Cleansing Committee on what to do. Two different courses of action were proposed, one involving the customary assault on the full range of nuisances and sanitary defects which blighted Sheffield, the other suggesting the implementation of more specific measures such as disinfection.¹⁴⁹ Calls for the latter course of action were not based on any belief in the water-borne or similar theories of infection, so much as the view that there was insufficient time to effect the wholesale removal of nuisances. This argument took on added weight when

a fatal case of cholera was reported in early October. The public, the local newspapers and medical men like Dr Hall continued to urge the Council to take advantage of the winter months to mount an attack on nuisances.¹⁵⁰

Public and official anxiety appears to have faded during the winter of 1865-66. The following summer, however, it quickly re-surfaced after the local press published details of how the disease had gained a foothold at a number of British ports and was beginning to spread inland.¹⁵¹ Judging by the editorial comment, reports and letters in the local press, there was a widespread feeling that the authorities, and particularly the Council as the L.B.H., were not doing enough. The Sheffield Daily Telegraph, for example, attacked the Council's recent sanitary record, declaring that it had failed to take advantage of the winter respite and despite cholera's approach and widespread public alarm was still 'not alive to the crisis'.¹⁵² The Sheffield Independent was slightly less critical, arguing that 'the Health Committee have shown some signs of activity ... but the activity is scarcely equal to the emergency'.¹⁵³

Whether or not the newspapers' criticism of the Council was justified is open to question. Within days of being accused of complacency the Council went some way towards silencing (or reassuring) its critics by explaining the various preventive measures already taken. Evidence drawn from the Council's minutes and the newspapers themselves reveal that official preparations for the epidemic began well

before the Privy Council ordered local authorities to take action in July. In mid-May the Health Committee had resolved that Sheffield and Ecclesall Bierlow Guardians should be asked to assume responsibility for providing medical relief if cholera broke out.¹⁵⁴ The Council subsequently approved this proposal and reached an agreement with the Guardians under which they would provide and equip hospital premises, set up dispensaries in various parts of the town and instruct their Medical Officers to attend and treat any cases of diarrhoea or cholera brought to their attention. All these measures and facilities were ready by the end of July.¹⁵⁵

As well as making provision for treating the sick the local authorities stepped up their efforts on the cleansing front. In the same week that the newspapers mounted their attack on the local authorities, the Chairman of the Sheffield Guardians informed his colleagues that 'A great deal had been done recently to put the town in a healthy condition and the Town Council had effected a great improvement'.¹⁵⁶ To illustrate this point, the Chairman, explained that the Council had permitted the Chief Sanitary Inspector to 'employ as many men as required for cleansing duties', and that in just two months these men, working alongside permanent Council employees, had cleaned all the town's rivers and goits, removed 5,000 tons of night-soil and a variety of other nuisances and had disinfected premises and streets with chloride of lime. In addition, the Guardians had also distributed handbills advising the poor on how to clean their homes and provided free lime for paupers. In the opinion of

the Chairman of the Guardians, the authorities 'had taken time by the forelock' and implemented all the measures recommended by the Privy Council. Handbills and posters distributed by the authorities, along with articles in the newspapers, provided a stream of advice that was identical with that seen in 1854.

Hearing details of the various forms of preventive action taken by the Council and Guardians, helped to appease their critics. The Independent, for example, quickly changed tack, praising their efforts.¹⁵⁷ Even the influential Dr Aveling, who had an axe to grind with the Council because of its failure to appoint a qualified medical man to the Health Committee, admitted that this had not prevented it from being 'active in cleaning away nuisances and otherwise improving the sanitary condition of the town'.¹⁵⁸ The only serious reservation expressed was due to the authorities' failure to mount a system of house-to-house visitation similar to that seen in 1849. As recently as 1865, Henry Jackson, a widely respected local medical man, had again extolled the virtues of the famed 'Sheffield Plan' at the annual congress of the National Association for the Promotion of Social Science.¹⁵⁹ The Independent reminded its readers of the 'beneficial results' which had accrued from the 'Sheffield Plan of Visitation' in 1849 and went on to urge the Council to implement a similar scheme which, it insisted, was a far more effective way of communicating with the poor than distributing leaflets which were 'rarely read'.¹⁶⁰

That relatively little was written in the local newspapers about cholera and related issues between early August and mid-September suggests that the Council maintained its programme and the Guardians were ready to provide medical relief if and when required.¹⁶¹ In the event, the cholera hospitals and dispensaries were not used. A number of cases and fatalities occurred in the nearby villages of Grenoside, Chapeltown and Ecclesfield in the middle of September, yet only one case came to light in Sheffield itself.¹⁶² This involved the death on 19 September, after a short illness closely resembling cholera, of a man residing in Castle Street. Although reports of this and a similar case in another part of the town fuelled rumours of a cholera outbreak, the public was reassured that both deaths were attributable to aggravated diarrhoea.¹⁶³ After this brief scare, cholera quickly disappeared from the news.¹⁶⁴

Overall, the official response in 1865-66 closely resembled that seen in 1848-49 and 1853-54, with the authorities concentrating their efforts on pre-emptive nuisance removal, sanitary cleansing and medical aid. The impact of the various changes and developments in theories of disease causation and transmission which had taken place appears to have been minimal. On closer examination, however, it becomes apparent that the public and the authorities were aware of the new measures and in many cases responded accordingly.

Warnings about the dangers of drinking foul water were issued from a variety of sources during the summer of 1866. The Sheffield Daily Telegraph warned that when cholera threatened, even greater care than usual should be taken 'to guard against the pollution of drinking water' and explained to its readers that 'the [cholera] poison ... is thrown off in the faecal discharge' and is 'communicated most readily by water tainted by the smell from, or still worse by actual contact with sewage'.¹⁶⁵ The Independent offered its readers similar advice, stressing that 'Bad water can cause cholera'. Dr Hall, whose advocacy of sanitary reform was based on miasmatic explanations of disease causation, pointed out that evidence from past epidemics convinced him that 'there is no more certain way of inviting attacks ... than by drinking impure water' and, like the two newspapers, he recommended that water should not be drunk unless it had been boiled for several minutes.¹⁶⁶

Generally speaking, the purity of Sheffield's drinking water, which was piped directly from reservoirs on nearby moors, was not questioned.¹⁶⁷ Nevertheless, local publications carried adverts for a variety of purification devices including filters and additives, most of which, it was claimed, would protect purchasers from ill health. Joseph Johnson promised that his 'Water Filter' removed all 'earthy, animal or vegetable matter, thus preventing the baneful effects which impure water directly tends to produce'.¹⁶⁸ Some traders were quick to realise that cholera could be exploited to boost trade. For example, one advert in the

newspapers declared authoritatively that 'IMPURE WATER CAUSES CHOLERA' and went on to state that the impurities could only be removed by cistern filters.¹⁶⁹ If people were not completely reassured by filters or additives they had the option of hiring Mr Allen F.C.S. who promised to examine, analyse and 'report on the sanitary condition of every description of water'.¹⁷⁰ Even though the expense of these products and services meant they were they were beyond the reach of the poor, a large number of filters and similar devices were reported to have been bought 'by householders in dread of cholera'.¹⁷¹

The belief that human excrement and victims' faeces in particular, spread or helped to spread cholera influenced actions by the authorities to some extent. Disinfection, general and specific, was undertaken on such a scale that the Health Committee was forced to buy 'four times as much lime as usual' in August.¹⁷² When the two suspicious cases occurred in September, the authorities took the various precautions recommended by Simon which were consistent with the view that patient's discharges, and any part of their body or belongings soiled with the same, were capable of transmitting cholera. The Chairman of the Guardians asked the surgeon who attended the Castle Street case to ensure that 'the body was at once put into a coffin or shell, that the room ... was locked up and all other steps were taken to prevent contagion'.¹⁷³ The 'other steps' included the sprinkling of chloride of lime in and around the victims' home and the destruction of clothes and bedding.¹⁷⁴ The public were told that cholera was not

'strictly infectious' and could not be caught directly from the sick, but that it could be contracted from their discharges.¹⁷⁵

4.7. 1866 IN PERSPECTIVE

The threat of cholera in 1865-66 revealed that the Medical Department of the Privy Council had formulated a number of new precautions which were recommended along with general cleansing operations. These were: (i) the medical inspection of ships arriving from infected ports, (ii) disinfection of human faeces, particularly those of cholera patients, (iii) the provision of uncontaminated drinking water, and (iv) the isolation of patients with cholera. This programme was undoubtedly shaped by changes in the medical and epidemiological understanding of cholera's etiology since in 1853-54. The greatest shift was not towards a water-borne theory championed by Snow, but to a variant, namely, that patients' discharges carried the cholera poison. The practical measures deriving from this were just added to the existing armoury, with none of the tried and tested measures from earlier epidemics being dropped. New knowledge was not 'discovered' and then had an impact as a discrete thing, rather it was constructed and interpreted as part of existing discourses and practical programmes.

Administratively, the disease was once again combated by the familiar combination of central direction and local

actions, the basis being emergency measures under the N.R.D.P.A. Within these provisions there was again room for a degree of variation locally and, as the case studies confirm, differences in the type of action taken were evident in 1866. Not surprisingly, the greatest contrast was between Hull and the three inland towns.

The experience of the 1853-54 meant that by 1865-66 cholera was regarded as a port disease. Simon and his colleagues at the Medical Department believed that the disease was most likely to be introduced into the country by seamen and emigrants and from this they devised a two-tier system of prevention. This involved firstly an attempt to keep the disease out by medical inspection at British seaports; and, if and when this failed, the implementation of general and specific precautions across the whole country.

The fear that cholera might be introduced by emigrants was felt very deeply in Hull and shaped the local response. But the local authorities did not just rely on medical inspection, it also took measures designed to prevent contact between emigrants and local people and traditional sanitary precautions. No direct attention was paid to water supplies, these were regarded as safe and secure.

In the three inland towns the response to the threat of cholera also had elements of the old and the new. In Leeds, Bradford and Sheffield, news of cholera's approach prompted the relevant local authorities to join forces and instigate

the familiar burst of sanitary activity. However, this was augmented by the implementation of some of those new measures recommended by Simon, though there were differences in emphasis. As was the case in Hull, these reflected local health concerns and politicking as much if not more than the particular exigencies of cholera. In Sheffield, the problem was not the quality of water rather its quantity. Shortages meant that cleansing was difficult and that water had to be stored and hence became more vulnerable to contamination, hence there were more calls than elsewhere for boiling, the use of additives and testing. In both Leeds and Bradford warnings were given about the dangers of drinking unsafe water, but the overriding action was still on the broad sanitary front.

Emergency sanitary activity began to be scaled down once the epidemic abated in 1865-66 and once again it looked as if a temporary crisis had only produced temporary responses. However, the years after 1866 did see significant changes, not because of cholera but due to the passage of the Sanitary Act in 1866. This Bill was drafted by John Simon and signalled the end of full local autonomy as several Clauses were compulsory. The Privy Council, through its Medical Department, was empowered to make local authorities provide sewerage systems and water supplies.¹⁷⁶ That the Act and cholera appeared in the same year was mere coincidence. The legislation was the culmination of several years work by Simon and was designed to provide lasting solutions to endemic urban

diseases; indeed, the 1866 epidemic continued to be fought, as had the two previous epidemics, through the N.R.D.P.A.

FOOTNOTES FOR PART 4

1. N. Longmate, King Cholera: the biography of a disease, 1966. p. 212
2. Hull Local Board of Health (HLBH): Minute Book, 27.7.1865.
3. R. Lambert, Sir John Simon 1818-1904 and English Social Administration, 1963, p. 377.
4. W. M. Frazer, The History of English Public Health, 1834-1939, 1950, p. 96
5. Ibid.
6. Hull and Eastern Counties Herald, (HECH), 3.5.1866.
7. Hull: Annual Register for the Year, 1866, p. 1.
8. HECH, 3.5.1866.
9. Ibid.
10. BPP, 1867 [3949] XXXVII, 1, Ninth Report on the State of Public Health for 1866 by the Medical Officer of the Privy Council, 'Proceedings Against Cholera under the Disease Prevention Act and Otherwise', p. 18. Also see: Bradford Observer, (BO), 5.7.1866; Sheffield Times, (ST) 14.7.1866.
11. ibid., p. 19.
12. F.B. Smith, The People's Health, 1830-1910, 1979, p. 230.
13. BPP 1867-68 [4072] XXXVII, Report on the Cholera Epidemic in England in 1866, pp. 3-17.
14. Ibid, pp. 236-238.
15. HLBH, Inward Letterbook, 24.7.1865.
16. Ibid.
17. Ibid.
18. J. Snow, Snow on Cholera ... with a biographical memoir and introduction by W.H. Frost, 1965; M. Pelling, Cholera, Fever and English Medicine 1825-1865, 1978; W. Farr, Vital Statistics: A memorial volume of selections from the reports and writings of William Farr, 1885.
19. William Budd, quoted in A.S. Wohl, Endangered Lives: Public Health in Victorian Britain, 1983, p. 124-5.
20. F.N.L. Poynter and K.D. Keele, A Short History of Medicine, 1961, p. 92.

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21. Pelling, op cit note 18 above, pp. 203-34.
 22. R.H. Shyrock, The Development of Modern Medicine- An Interpretation of the Social and Scientific Factors Involved, 1974, p. 292.
 23. PP 1854-55 [1901] XLV, Report from the Treatment Committee of the Medical Council, (Treatment Ctee) p. 52.
 24. Smith, op cit, note 12 above, p. 235.
 25. Lancet, ii, 1855, 524-525.
 26. Medico-Chirurgical Review, 15, 1855, 462.
 27. R.J. Morris, Cholera, 1832: The Social Response to an Epidemic, 1976, p. 209.
 28. Smith, op cit, note 12 above, p. 235.
 29. Morris, op cit, note 27 above, p. 209.
 30. J.V. Pickstone, Medical Innovation in Historical Perspective, 1992.
 31. Ibid, p. 83.
 32. Pelling, op cit note 18 above, pp. 275-281.
 33. British Medical Journal (B.M.J.), i, 3.6.1853. 455.
 34. Medico-Chirurgical Review (M-C.R.), 15, 1855, 459.
 35. Snow op cit note 18 above, pp. 1-34.
 36. Longmate, op cit, note 1 above, p. 208.
 37. Braithwaite's Retrospective of Medicine, 28, 1853, 397-400. This includes an article by Snow in which he advocated measures identical to those urged by the General Board of Health.
 38. B.M.J., i, 1858, 53.
 39. J.K. Crellin, 'The dawn of germ theory: Particles, infection and biology' in F.N.L. Poynter, ed., Medicine and Science in the 1860s, 1968, pp. 57-76.
 40. A. Hardy, 'Water and the Search for public health in the eighteenth and nineteenth centuries', Medical History, 28, 1984, 250-82; P.S. Brown, 'John Snow, The Autumn Loiterer', Bulletin of the History of Medicine, 35, 1961, 526.
 41. J.M. Eyler, Victorian Social Medicine: the ideas and methods of William Farr, 1979, p. 117; J.M. Eyler, 'William Farr on the Cholera: the sanitarian's disease

theory and the statisticians method', Journal of the History of Medicine, 28, 1973, 79-100.

42. Report from the Treatment Committee, op cit note 23 above, p. 52.
43. Eyler, op cit, note 41 above, p. 117.
44. Ibid.
45. Lambert op cit, note 3 above, p. 51.
46. B.M.J., 1866, ii, 411.
47. Pelling, op cit, note 18 above, p. 280.
48. Ibid, p. 275. Budd also proposed that the issue could be simplified by replacing the word 'contagious' and 'infectious' with 'catching'.
49. Lambert, op cit, note 3 above, p. 51. Like Farr and Budd, Simon still maintained that faecalised air was as dangerous as faecalised water.
50. Ibid, p. 250-254.
51. M-C.R., 19, 1857, 61-85.
52. B.M.J., ii, 1865, ii, p. 643.
53. Pelling, op cit, note 18 above, p. 284.
54. M-C.R., 19, 1857, pp. 83-85.
55. BPP 1856 [2103] LII 357, Report on the last two Cholera Epidemics in London, as affected by the Consumption of Impure Water, by J. Simon
56. Morris, op cit, note 27 above, p. 29.
57. BPP 1866 Eighth Report of the Medical Officer To The Privy Council for 1865, Appendix No. 15. 'Extract from Mr Radcliffe's Report on the Outbreak of Cholera at Theydon Bois, Epping, pp. 438-440.
58. Pelling, op cit, note 18 above, p. 248.
59. Lancet, ii, 1866, 100. Also see: Eighth Report of the Medical Officer, op cit note 57 above, p. 29.
60. Lancet, ii, 1866, 144.
61. H. Whitehead, 'The Broad Street Pump: An episode in the cholera epidemic of 1854', Macmillan's Magazine, 13, 1865, pp. 113-120. Also see: Hull Advertiser, (HA), 11.8.1866.

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62. W. Luckin, 'The final catastrophe: Cholera in London, 1866', Medical History, 21, 1977, 32-42.
 63. M-C.R., 38, 1866, 129-161, These include unusual seasonal and atmospheric conditions; human intercourse and contagion 'to some extent'; a debilitated state of health and other predisposing causes; and 'the reception into the system of matter - either by the lungs or by the aliment - excreted from people in cholera'.
 64. Times, 28.7.1866.
 65. Bradford Review (BR), 4.8.1866.
 66. Smith, op cit, note 12 above, p. 236. Smith argues that Pettenkofer's work 'renovated the miasmatic theory'. This may well have been the case, but as Pelling pointed out, the Committee For Scientific Enquiries was more impressed by Farr's formulation. Pelling, op cit, note 18 above, p. 245.
 67. ECH, 3.4. 1866.
 68. HLBH, Letters, 27.7.1865.
 69. C. Beckett, Public Health in Hull - 1848-1871: Being a study of the work of the Local Board of Health after the first Public Health Act, Unpublished MPhil Thesis, University of Hull, 1984, pp. 118-119.
 70. HA, 23.9.1865.
 71. ECH, 3.5.1866.
 72. HLBH, Letterbook, 3.5.1866.
 73. Times, 9.5.1866. Even proposed that the Government should suspend the emigrant traffic.
 74. ECH, 10.5.1866.
 75. These details appeared in HA, 12.5.1866; ECH, 9.5.1866.
 76. ECH, 10.5.1866.
 77. Ibid.
 78. HA, 12.5.1866. The D.P.A. made the Board responsible for burials of victims and demanded that they should forbid wakes.
 79. HA, 16.7.1866.
 80. Ibid.
 81. HA 11.8.1866. Also see: ECH, 3.5.1866 for the Chairman of the L.B.H.'s view that 'one of the most important predisposing causes to the 1849 epidemic was the

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- impregnation with sewage of drinking water. Cf. ECH, 16.8.1866. For the editor's view that 'Impure water is undoubtedly one of the most prolific sources of the disease'.
82. E. Gillett and K. MacMahon, A History of Hull, 1980, p. 264.
 83. HA, 16.8.1866.
 84. Times, 25.7.1866
 85. ECH, 16.8.1866. Reproduces the Privy Council's 'Directions and Regulations ... in relation to Asiatic Cholera', which state that Boards of Guardians were responsible for providing all forms of medical relief, disinfection, procurement of lime and disinfectants, setting up house-to-house visitation, ensuring the purity of water supplies and reporting nuisances. Also see: Lambert, op cit, note 3 above, for further details.
 86. ECH, 16.8.1866; HA, 15.8.1866.
 87. Beckett, op cit, note 69 above, p. 119.
 88. HA, 11.7.1866. For Goole see: HA, 25.7.1866
 89. Report, op cit note 13 above, p. 238
 90. Times, 18.5.1866. States that there were 32 cases in Liverpool, all amongst emigrants.
 91. HA, 2.6.1866.
 92. BO, 5.7.1866; ST, 14.7.1866
 93. For full details see: J. Toft, Public Health in Leeds in the Nineteenth Century: A Study of the Growth in Local Government Responsibility, Unpublished MA Thesis, University of Manchester, 1966, Chapter VII.
 94. Leeds Town Council (LTC), Minutes, Vol 12, September 1864-October 1866, 16.5.1866. His other duties included was to report on sanitary conditions and 'ascertaining the existence of epidemic diseases'.
 95. LTC, Scavenging and Nuisance Committee (SNC), Minutes, 25.5.1866. These included ruling that 'offensive materials' should no longer be stored at the Waterloo and Lemon Street Depots - both of which were situated in densely populated areas.
 96. Toft, op cit, note 93 above, p. 77.
 97. Leeds Mercury, (LM), 27.7.1866.
 98. LTC, SNC, Minutes, 27.7.1866. Records that there was slight confusion about which body was responsible for

abating overcrowding. This matter was clarified at the meeting, with the Council accepting this task in Lodging Houses and the Guardians in other premises.

99. LM, 26.7.1866.
100. Ibid, 2.8.1866. All the medical assistants were surgeons. Two depots where the public could obtain disinfectants were opened in each district if they provided a note supplied by a medical man.
101. Leeds Union Guardians (LUG), Minutes, 1.8.1866.
102. Ibid.
103. LM, 31.7.1866.
104. Toft, op cit, note 93 above, p. 79.
105. LUG, Minutes, 12.12.1866.
106. LT, 4.8.1866; 24.7.1866.
107. LM, 7.8.1866.
108. Ibid. This was given in a leaflet distributed in Leeds.
109. Leeds Times, (LT), 2.8.1866.
110. LM, 31.7.1866.
111. Ibid.
112. Toft, op cit, note 93 above, p. 289. Also see: LM 22.9.1865. Where it was argued that a new supply was vital 'if we are not all to be poisoned'.
113. LM, 4.8.1866. The paper had earlier applauded the decision of the London authorities to cut off the water supply and have it analysed following the occurrence of cholera at the Temple.
114. Ibid, 7.8.1866.
115. Report, op cit, note 13 above, p. 236.
116. Toft, op cit, note 93 above, p. 78.
117. Ibid, The Council provided new bedclothes to replace those which had been destroyed.
118. LM, 25.8.1866. According to the press these occurred in the last week of August, when there were three cases and two deaths.
119. LT, 4.8.1866.

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120. LUG, Minutes, 12.9.1866. At this date the Sanatorium was in use.
 121. BO, 21.6.1866; Bradford, Reports of the Committees of the Town Council for year ending 30 September 1866.
 122. BBG, Minutes, 13.6.1866; 22.6.1866. Neither agency possessed buildings which were suitable for use as a cholera hospital. Patients could have been accommodated at the Workhouse but the Guardians were against this, fearing it would endanger the lives of indoor paupers.
 123. Bradford Board Guardians (BBG), Minutes, 25.7.1866.
 124. Ibid.
 125. BO, 2.8.1866.
 126. Ibid 5.7.1866 and 2,8.1866. For the cases at Batley see: Bradford Sanitary, Baths and Cemetery Committee (BSBCC), Minutes, 1.8.1866. The Minute Book states that the Committee had already been specially convened to 'enquire into the sanitary condition of the borough' and to consider the question of disinfecting the beck and canal, the town's main waterways.
 127. LTC, SBCC, Minute Book, 1.8.1866
 128. BO, 2.8.1866; BR, 4.8.1866.
 129. BO, 2.8.1866; 9.8.1866. BR, 4.8.1866; 18.8.1866. For details of official placards urging people to seek immediate treatment for premonitory symptoms see: BBG, Minutes, 13.9.1866.
 130. BR, 4.8.1866; BO, 9.8.1866.
 131. BO, 2.8.1866
 132. Ibid. Also see. D. Russell, 'The Pursuit of Leisure', in D.G. Wright and J.A. Jowitt, Victorian Bradford, 1981, pp. 200-205. This examines middle class concerns about working class leisure pursuits and suggests that drinking received the most sustained criticism.
 133. BO, 9.8.1866; Cf. BR, 4.8.1866.
 134. BO, *ibid.*
 135. BBG, Minutes, 4.8.1866. Bell found Mrs. Cumming suffering from 'constant vomiting and purging, violent cramps ... and a general depression'.
 136. Ibid. 7.8.1866.
 137. Ibid, 5.8.1866. Despite prompt medical help, Mrs Cumming died.

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138. Ibid, 8.8.1866.
 139. BO, 9.8.1866.
 140. BBG, Minutes, 30.8.1866., 3.9.1866. and 4.9.1866.
 141. BSBCC, Minutes. The records for August and September give details of the full range of nuisances on notice.
 142. W. Cudworth, Historical Notes on the Bradford Corporation, 1881, p. 161. Also see BR, 27.10.1866. A report noted that increased level of sanitary activity encouraged at least one person to break the law. A man posed as a Sanitary Inspector, demanding money and other goods from people who he said were contravening the N.R.A..
 143. V. Thornes, Chartists and Reformers in Sheffield 1846-1870: their impact on municipal politics, 1981, p. 9.
 144. Sheffield and Rotherham Independent (SRI), 10.8.1866, said the Act would provide the Council with the powers it ought to possess.
 145. Sheffield Local Register, 12.10.1864. & 11.1.1864. Also see: Sheffield Borough Council (SBC), Minutes, 9.8.1865.
 146. J.M. Furness, Fifty Years of Municipal Records 1843-1893, 1893, pp. 131-133.
 147. SRI, 10.8.1865; 19.6.1865. The latter contains reports of cholera's progress on the continent.
 148. Furness, op cit, note 146 above, p. 135.
 149. SRI, 11.9.1865; Sheffield Daily Telegraph (SDT), 2.10.1866.
 150. SRI, 7.10.1865 & 11.9.1865.
 151. Sheffield Times, (ST), 14.7.1866. & 21.7.1866.
 152. SDT, 31.7.1866.
 153. SRI, 27.7.1866.
 154. Sheffield Health Committee (SHC), Minutes, 18.4.1866.
 155. SHC, Minutes, 18.5.1866. The Council agreed that the Guardians expenses should be paid out of the Borough fund.
 156. SRI, 2.8.1866; ST, 4.8.1866.
 157. SRI, 3.8.1866.

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158. J. Aveling, The Present State of Medicine in Sheffield, 1866, p. 11.
159. H. Jackson, 'Precautions Against Cholera', Transactions of the National Association for the Promotion of Social Science, 1865, pp. 413-5.
160. SRI, It is not clear if this advice was acted upon.
161. SHC, Minutes, 17.8.1866. These show that cleansing went ahead apace.
162. ST, 15.9.1866; 22.9.1866. In the latter edition it was stated that 8 deaths occurred in these villages, all of them in 'confirmed drunkards'.
163. SHC, Minutes, 21.9.1866.
164. Report on the Cholera Epidemic in England in 1866, op cit, note 13 above, p, 236, where it is stated that a total of 14 deaths in the Sheffield registration district, 4 in Sheffield North, 6 in Sheffield South, 3 in Brightside and 1 in Handsworth and the same total in Grenoside and Wortley. Once again there is a discrepancy between official government sources and local sources. None of Sheffield's newspapers reported deaths from Asiatic cholera in Sheffield itself. Moreover, on the August 2, the Chairman of the Guardians went on record as saying that 'Not a single case of cholera' had occurred so far that year in Sheffield. See: SRI 2.8.1866.
165. SDT, 28.7.1866.
166. SRI, 14.8.1866..
167. W. Terrey, History and Description of Sheffield Waterworks, 1908, pp. 22-23. Also see: Sheffield Corporation Water, Minutes Of Evidence, Reports And Correspondence. Evidence Given to the Select Committee on Private Bills, Sheffield Waterworks (Bradfield Innundation) Bill, 1864. Which states that by the mid-1860s only a relatively small number of people in Sheffield were without Company water. Of the 43,000 houses in the town in 1864, 38,000 were supplied with Company water. The fact that so many people received their water from the Company rather than drawing it from ponds, well or rivers in the town reduced the risk of sewage contamination considerably.
168. See for example, Sheffield and Rotherham Red Book and Almanack 1866, (SRRBA), and all local newspapers.
169. SDT, 18.8.1866.
170. Ibid.
171. Ibid.

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172. SHC, Minutes, 17.8.1866.
173. SRI, 20.9.1866.
174. SHC, Minutes, 21.9.1866; ST, 22.9.1866.
175. ST, 4.8.1866.
176. Wohl, op cit note 19 above, pp. 155-6.

PART 5

CONCLUSION

This part first discusses the experiences and reactions to the later cholera threats in 1871-71, 1883-84 and 1892-93, before moving on to the main conclusions.

5.1 CHOLERA 1867-93

1871-72

Initially, the official response to the threat of cholera in 1871 was coordinated by officers of the Privy Council who once again used an Order in Council to enable local authorities in British ports to take appropriate action.¹ Late in 1871 the powers of the Medical Department were transferred to the newly established Local Government Board (L.G.B.), an agency which has been described as Britain's first 'unified public health administration'.² The new Public Health Act, 1872 provided the L.G.B. with wider powers, including provision to establish District Sanitary Authorities (D.S.A.) and the compulsory appointment of a (qualified) Medical Officer of Health (M.O.H.).³ In terms of keeping cholera at bay, the powers allowing the creation of Port Sanitary Authorities were particularly important as they institutionalised the two-tier approach to the control of epidemics which first emerged in 1866.⁴

Not unexpectedly, the greatest activity in Yorkshire was seen in Hull, where as soon as cholera reached the Baltic ports in 1871 warnings were issued about the dangers posed by emigrants and the need for sanitary vigilance.⁵ The message

was reinforced at the end of July by the confirmation of two cases on board a ship which had sailed from the Baltic.⁶ The Privy Council immediately ordered that all ships arriving at Hull from infected countries should be subjected to a thorough inspection before entering the port and that necessary measures for burial of victims at sea, for isolating the sick and for disinfection should be 'strictly enforced'.⁷ Simultaneously, the local authority introduced more inspections and cleansing.⁸ Throughout the cholera scare of 1871-73 frequent warnings were again issued about the danger posed by water contaminated with the excreta of victims. In Hull, as in 1866, there was confidence in the water supply and greater fears were expressed about the possibility of contaminated water being inadvertently carried into the town on ships. The crews of local vessels leaving for 'cholera districts' were warned to 'take enough good water from Hull so as not to have to fill up in cholera ports where healthy water is not available'.⁹

Whilst there was mounting confidence that medical inspection would prevent the importation of cholera, the experience of 1866 left medical men and officials in no doubt that additional precautions were necessary. Thus, D.S.A.s everywhere were instructed to implement the familiar precautions to ensure that if cholera did arrive it would not spread. Alongside providing medical facilities, undertaking cleansing operations, and advising on matters like diet and hygiene, there were now clear statements that steps to ensure that water supplies were not liable to contamination.¹⁰ In

the inland towns of Yorkshire this message was taken seriously and appropriate measures adopted.¹¹ Epidemic cholera did not become established, indeed, the Registrar General's returns showed fewer cholera deaths in both 1871 and 1872 than there had been in 1870.¹² In the event, the threat in 1872 appeared rather remote, yet the absence of even localised outbreaks boosted confidence in sanitary science and its applications.

1883-1884

The next threat in 1883-84 was more immediate and taken more seriously, especially following reports of high mortality on the continent.¹³ The medical inspection of ships, their crew and passengers was now firmly regarded as the key to keeping cholera out of the country. A new factor now was that suspicion also fell upon ships cargoes, particularly those which were thought to be 'capable of conveying infection' and inspection was widened to include these.¹⁴ In Hull there were worries that rags imported for recycling in the West Riding shoddy trade represented a very serious threat, as there was no way of knowing who had last used it or how.¹⁵ As a result, the Medical Officer of Health (M.O.H.) and his staff were instructed to impound and disinfect all imported rags before allowing them to be transhipped to their inland destinations. Beyond this there was a slightly different balance of priorities, with greater attention given to water supplies, the inspection of lodging houses and the provision of isolation hospitals. The latter being particularly

associated in the 1880s with the control of infectious diseases.

The threat of cholera was again a source of anxiety to officials in the inland towns of Yorkshire. Indeed, the news that cholera was present in Europe in 1883 prompted the Yorkshire Association of M.Os.H. to convene a special meeting in Leeds to discuss preventive action.¹⁶ The meeting resolved that M.Os.H. representing inland Sanitary Districts, including Leeds, Bradford and Sheffield, should ensure that: (i) attention be given to water supplies; (ii) general sanitary cleansing and disinfection be adopted; and (iii) lodging houses be inspected and overcrowding removed. These measures were more traditional than those taken in Hull, but demonstrate clearly that cholera could still shock inland towns into temporary sanitary action. Legislative changes now made cholera easier to combat. Most large towns had M.Os.H. and sanitary authorities already active in public health and increasingly used to intervening in health crises.¹⁷ Many of the actions taken had changed very little since 1865-66, or from 1848-49 for that matter. While few, if any, measures had been dropped from the sanitary armoury, many new priorities and methods had been added. This aggregate approach reflected continuing uncertainties about cholera's cause and mode of transmission amongst the medical profession in Britain and internationally.

Throughout the 1870s and early 1880s a number of theories were discussed in the medical and lay press, especially as

investigators tried to assimilate cholera into the model of a germ theory of disease.¹⁸ Pettenkofer's theory, which he and others had refined considerably since the 1860s, continued to receive widespread support in Britain and abroad.¹⁹ Similarly, the work of Robert Koch, who claimed to have and isolated the cholera vibrio in 1884, was widely discussed.²⁰ His microscopic and other evidence was received coolly in Britain, where many doctors continued to believe that cholera was not caused by a specific microbe, but that the germs of ordinary diarrhoea or dysentery took the new form and properties of epidemic cholera in particular conditions in the gut or environment.²¹ British medical authorities were no longer interested in the investigation of cholera. When the disease reached Egypt in 1883, the German and French governments obtained permission from the Foreign Office to send research teams, the British authorities despatched a team of doctors to set up preventive and treatment measures.²²

For the British government cholera was by the 1880s primarily a colonial disease and one which due to late nineteenth century imperialism was growing in importance. With India the home of the cholera the Imperial government, along with that in India, was under pressure to control epidemics at source by the implementation of quarantines or the introduction of sanitary improvements into India itself.²³ Both demands, made increasingly through the International Sanitary Conferences, were resisted because of their impact on trade and public spending. Besides, the authorities and medical men in India were much more hostile to quarantines and

sanitary policing than metropolitan agencies had become.²⁴ It seems that London bowed more to European diplomatic pressure, while in India the local problems of urbanisation, pilgrimages and finance held sway; though it was also true that colonial doctors held on to miasmatic ideas much longer than their European counterparts.

1892-93

During the early 1890s Europe was once again host to epidemic cholera. Whilst levels of mortality on the continent were significantly lower than in previous visitations, some places suffered badly. In Hamburg, for example, 10,000 people died in just six weeks in 1992.²⁵ With cholera at such close quarters, officials and the public in Britain became increasingly nervous.

Hull's close trading links with Hamburg meant its authorities did not need to be told to take action. By the time the L.G.B. ordered Port and Riparian Sanitary Authorities to take steps, the Hull and Goole P.S.A. had already acted, making the necessary arrangements for the medical inspection of ships and the provision of medical facilities.²⁶ All ships arriving at Hull were inspected, suspect cargoes destroyed or fumigated, and passengers or crew found to be suffering from 'infectious diseases' sent to hospital. Meanwhile, in the town itself, sanitary cleansing and disinfection were stepped up and the public advised to seek immediate treatment for diarrhoeal illnesses.²⁷ Whilst there was virtual unanimity

amongst government officials and the medical profession that medical inspection represented the most effective means of keeping cholera at bay, there was a feeling in Hull that the P.S.A. needed greater powers to 'prevent emigrants arriving from Hamburg'.²⁸ The news in September that a case of cholera had evaded medical inspection prompted the local press to call for a seven day quarantine for all shipping which had sailed from infected ports. The Eastern Morning News demanded to know, 'Why should ships from a cholera devastated city ... be permitted to bring the deadly germ into the heart of our town'?²⁹ However, medical opinion saw no need for a return to quarantines in Britain. At a meeting of the B.M.A. in Newcastle in 1893, Hull's Port Sanitary Authority's Medical Officer, J. Wright-Mason, explained that quarantines were futile, because they had never worked and diverted attention away from sanitary measures, the tried and tested way to combat cholera.³⁰

Fears that the town was vulnerable appeared to be warranted. In August and September 1993 a spate of cholera cases, several of them fatal, were reported amongst local people.³¹ Initially, there was a degree of confusion about whether the cases were true 'Asiatic' cholera, though this was quickly settled when the M.O.H. used the bacteriological services of the L.G.B. to confirm the worse.³² With the full support of the L.G.B. the authorities in Hull sought to prevent the further spread by action on several fronts. First general sanitary and medical precautions were stepped up. This saw four 'sanitary columns' comprising Inspectors of

Nuisances, sanitary officers, flushers, limewashers and disinfectors, mount a blitz on sanitary hazards in their respective districts. Additionally, a steam pump was hired to ensure that sewers and drains continued to flow and the Guardians agreed to supply disinfectants to the poor for use in and around the home. Meanwhile, all medical men were requested to notify cases of diarrhoea to the M.O.H., medicines were provided free of charge and the public were urged to take a number of special precautions.³³ Where cases were reported, sanitary measures were more 'concentrated'. Sufferers were removed to hospital and corpses to a temporary and isolated morgue, and then to a separate burial ground. This was followed by the removal of any excreta for cremation, the destruction of clothes, bedding, floor coverings and furniture, the cleansing and disinfection of privies and the flushing and disinfection of subsidiary drains. Where cases of diarrhoea were reported the authorities provided pails charged with disinfectants for 'the reception of evacuations of the patients'. These were collected daily by sanitary staff and taken away for cremation. As had been the case in previous scares, no steps were taken to protect the town's water supply which was considered to be safe. During the 'epidemic' of 1893, a total of 17 cases and 12 deaths occurred in Hull.

News that cholera was present in Hull caused apprehension in the large towns of the West Riding.³⁴ However, Leeds, Bradford and Sheffield were prepared. In both Leeds and Bradford the local authorities had responded with alacrity.

Reports of solitary cases in both towns saw the authorities take immediate steps to isolate victims (and in Leeds, other householders), to disinfect their possessions, homes and privies, and to clean and disinfect adjoining sewers and drains.³⁵ In Sheffield, the City Council took steps to cleanse insanitary districts, a measure which was praised in local newspaper.³⁶

In 1894 a handful of imported cases were reported in Britain. Neither these, nor the cases and deaths amongst the indigenous population in 1893, dented widespread faith in what was increasingly seen as the British method of combating cholera. Commenting on demands by certain P.S.A.s for the reintroduction of Quarantine, Dr Thorne Thorne, President of the L.G.B., argued that quarantines,

'would have involved a grave departure from the traditional attitude of England in the face of cholera; an attitude which has been one of the main forces in securing for this country that sanitary administration and those habitual sanitary practices which have won for her the esteem and envy of other nations, and which have been at the root of the greatest saving of life from the preventable diseases that has ever been recorded in the history of the world'.³⁷

For all their sophisticated laboratory medicine and bacteriology, Germany could still experience a crisis like that in Hamburg, whereas Britain's sanitary science and associated public health system had once again ensured freedom from epidemic cholera.

5.2 CONTINUITY AND CHANGE IN THE COMPARATIVE HISTORY OF CHOLERA, 1848-93

As noted in the Introduction, the substantial body of work on cholera in Britain, which followed in the wake of the seminal contributions of Briggs and Rosenberg, has not pursued their agendas for comparative and sequential studies. Studies of single epidemics, usually the first in 1831-2, or of a single town or theme still dominate the field. The neglect of the later epidemics has been justified on the grounds that the first epidemic had the greatest impact, and that after this cholera really belonged to the history of public health and medical science. This study has shown that the impact of the later epidemics was different from that of 1831-32, but no less interesting and perhaps more revealing of official and other attitudes to health crises. It has also shown, in line with the expectations of Briggs and Rosenberg, that there were variations in the experiences of towns due to different physical and economic geographies, and to different socio-political structures and relations.

The ideal in comparative studies is to consider the same issues and variables in different conditions or different variables in the same conditions. However, historical data is rarely complete or consistent enough to allow these ideals to be realised. Such was the case with the records on cholera and public health across the three epidemics and four towns considered in this study. For example, for the 1848-49 epidemic there was only qualitative information on the

official response in Bradford, but for later epidemics there was detailed quantitative data, even down to the number of drains unblocked. In the case of Sheffield there are no records of the Board of Guardians. On the other hand, Sheffield's lively radical culture and press made the popular responses easier to document than in Bradford where the working class voice found little recorded expression. Despite the unevenness of the sources, this study has tried consistently to discuss the same issues and themes throughout. The consideration of three epidemics over sixteen years, means that I have had to rely on secondary sources for contextual information on wider political and public health measures in the four towns. However, these sources have not been treated uncritically and on a number of occasions their interpretations have been questioned. Inevitably a study that seeks to compare four towns cannot match the painstaking detail that is often a feature of single town histories, but then I did not set just to create another piece of a jigsaw, rather the aim has been to create pieces that match, which can be put together and to make sense of the picture that emerges.

The scope of this study - four towns over two decades - has meant that certain themes have not been pursued as fully as would have been possible if the focus had been on a single or even two towns. For example, local political variables have only been introduced when they were overtly important. No systematic attempt has been made to analyse the local political response in terms of links and relationships between party politics and local government structures over time. The

background of party in-fighting and other factors remains to be fully explored. There are likely to be 'rich pickings' for future researchers who take up the long term development of sanitary reform, though such variables were clearly less important in short term responses to epidemics. A cautionary note should be made however; anyone wishing to undertake a comparative approach along such lines will have to tread very carefully as common 'party lines' across towns may be difficult to discern, not least because of the differences in the composition and policies of the different parties in each of the towns and over time.

5.2.1. EXPERIENCES

This study has shown that the understanding we have of the 1831-32 cholera epidemic is a poor guide to what happened in subsequent cholera crises. The mortality in 1848-49 was at least double that of 1831-32, but there was less sense of national crisis and fewer instances of local social unrest. While the 'two nations' model, most effectively used by Morris and Durey remains the most valuable approach, it has been shown that this must take on board the fact that class relations varied between industrial towns in the same county and altered over time. The 'two nations' in Hull in 1849 were quite distinct from those in Sheffield. Nonetheless cholera remained a disease suffered mainly by the working class and like other urban diseases was perceived and acted upon as a working class problem.

In 1848-49 there were major differences in mortality between the towns, with Hull and Sheffield at two ends of the spectrum nationally and regionally. In 1853-54 and 1865-66 none of the four towns experienced a major epidemic, though they did experience exceptional levels of public health activity, such that one can talk of an 'epidemic consciousness' being present in every town. While nationally there was an incremental fall in cholera mortality over the three later epidemics, in the four towns there was a single fall after 1849. As each scare passed there was growing confidence that the disease was controllable. By 1865-66 cholera was increasingly seen and acted upon as a port disease, though this did not halt precautionary measures being taken by the inland towns, right up to the 1890s. This shows that despite its diminishing impact on mortality, cholera was still a 'shock' disease and that despite increasing scientific understanding and success in control it still had a profound psychological effect. It is impossible to say what combination of circumstances produced the varied mortality of the four towns, though it was possible and interesting to speculate. What is clear is that in Sheffield in 1849 and elsewhere in later epidemics, official actions were felt to have 'worked' and prevented or contained the epidemic. Thus, after the 1840s cholera was no longer regarded as capricious or a divine judgement beyond the control of human agency, but a disease which could be combated by rational measures.

5.2.2. OFFICIAL RESPONSES

The administrative arrangements and disease experiences of the four towns were all different in 1849 and changed between, and sometimes during, epidemics. An important finding of this study has been that there were significant changes in the official response over the three epidemics. In 1848-49 there were major differences between the towns in levels and forms of activity both to the approach and the containment of the epidemic. This was due to a number of variables: social relations and class attitudes, the role of the medical profession, theories of cholera's etiology, local reactions to relations with central government, the intensity of the mortality crisis and past experiences of epidemic diseases. Over the four towns in 1848-49 arguably the most important and consistent factor in shaping the official response was social relations and attitudes. In Hull the epidemic revealed the inadequacies of local government and class attitudes which reflected the social apartheid of the town. Whilst in Sheffield, relatively close social ties led, with one notable exception, to class cooperation and consensus on appropriate measures. The relative importance of other factors varied. For example, in Bradford it was the intensity of the epidemic which prompted major revisions in sanitary and medical actions, whilst in Leeds the recent experience of fever epidemics provided the framework for action.

The most striking feature in 1853-54 was the lack of variation in official actions across the four towns. Local government and medical agencies all seemed to have 'learned

lessons' and tried to implement the 'Sheffield Plan' which had worked in 1849 and was now recommended by the G.B.H. Historians, taking their lead from Chadwick's well known antipathy to curative medicine, have tended to see public health only in terms of sanitary measures and environmental improvements. However, during cholera and other epidemic crises there was a clearly defined and important role for curative medicine which complemented sanitary initiatives. Despite this growing symmetry, the Local Board of Health in Hull, recognising the vulnerability of the town and the possible damage another epidemic could have on the local economy, pioneered port medical inspection. This was not a return to quarantines, it was a new measure involving the policing of shipping and emigrants, the establishment of isolation hospitals and the insistence on 'burials' at sea. In general, these anticipated the growing adoption of a two-tier approach to cholera, which involved preventing the entry of the disease through ports, and only secondarily pursuing sanitary measures in inland towns. After 1866, the movement of cholera became a matter of international concern, involving the Foreign Office, India Office, the Board of Trade and a series of International Sanitary Conferences which led to international agreements on the policing and control of the disease. Thus, between 1849 and 1893, the agents of control changed from Poor Law Guardians to high diplomats.

A well known feature of the epidemics of 1848-49 and 1853-54 is the work of John Snow and his claim that cholera was a communicable disease, transmitted via faeces and spread

most commonly by contaminated water. A number of historians have noted that these ideas, together with the complementary work of Budd, were only accepted slowly by the medical profession and had a very limited impact on sanitary practice. This study has shown, however, that from 1865 and in all four towns, new measures based on Snow's ideas were adopted. These 'specific' measures did not replace tried and tested actions, they were added to them. The new measures were recommended by John Simon in a series of Memoranda issued through the Medical Department and confirm local authorities' increasingly reliance on expert advice from central government. This contrasts with the situation in 1848-49, where there was resistance to central interference by both local officials and medical men.

5.2.3. SOCIAL CLASS AND SANITARY REFORM

Throughout the thesis social class has been used as a tool to examine and explain the behaviour and attitudes of different groups and individuals. The notion of class adopted is similar to that used by Morris and Durey in their studies of the cholera epidemic of 1831-32, something that has allowed comparisons to be made between their work and this study. Central to the approach is the view that each of the major classes was bound by a group identity, common interests and a distinctive culture. Working from this perspective it has been argued that a number of factors associated with class position help to shed light upon the different forms of response to the successive cholera threats and epidemics.

Past experience of diseases, access to resources to flee or fight, subcultural morés, and expectations of the actions of other classes all played a part in shaping distinctive attitudes and in determining behaviour. This does not mean that people from a particular class behaved uniformly; indeed, much of the evidence examined shows that people within the same class acted differently and even in contradictory ways. Clearly, the impact of the factors mentioned above varied from place to place and time to time - something which helped to explain differences in the way individuals and groups within a class responded.

Middle class responses to the 1848-49 epidemic varied greatly even within a town. In Hull, for example, the inaction of authorities contrasted greatly with the efforts of medical men and local philanthropists to ameliorate conditions. The crucial point here is not so much that the individuals and groups behaved differently, but that their class position meant they were in a position to chose to act in one way or another. The working class did not have such choices and the recognition of this difference was an important factor in class consciousness.

More generally, the middle class responses in 1848-49 were less towards cholera as such and more towards the form of the local official response. In Leeds, philanthropic measures complemented organised sanitary measures and continued a tradition of responding to working class distress. However, in Hull the actions of the 'concerned' middle class attempted

to compensate for the absence of effective official measures and for much of the epidemic even medical men were forced to work outside of the official preventive machinery. The case of Hull also shows that even with cholera threatening and present there was no truce between 'reformers' and 'economists'. In later epidemics, there was less scope for middle class action because the official response was stronger and more uniform; there was by then at least some consensus that authorities had to take action. Another reason for the relative absence of philanthropic action after 1849 was that none of the four towns experienced a serious mortality crises. Nonetheless, across all three epidemics the commonest middle class view was that those who suffered in the epidemics were culpable, due to their ignorance and fecklessness. In other words, the problem was not so much the disease as the people. While this view was often shared by those supporting sanitary reform, they did acknowledge that only local authorities and rate-payers were in a position to effect and fund lasting environmental improvements.

This study has uncovered new evidence on a subject that has long been a lacunae in the history of public health, namely, what did the 'public' or working class think about public health and sanitary reform? Most historians have ignored this question and where it is discussed, as in Wohl's generally excellent Endangered Lives, the working class is said to have been 'tired, beaten down and compliant' and are characterised by 'dull resignation' and 'mute acceptance'.³⁸ This seems to accept the verdict of middle class sanitary

reformers that the 'public' were ignorant and indifferent, or even obstructive towards sanitary reform. This study has shown that working class reactions to sanitary reform were not characterised by ignorance or hostility, but rather were varied and patterned. There are examples of the working class taking up official sanitary precautions, ignoring them, and resisting them, not to mention the adoption of self-help or alternative measures. In each case actions were guided by a specific, usually local, understanding of urban disease ecology and of the wider determinants of health and disease. This knowledge of the local physical environment was linked to views on rights and responsibilities. More generally, sanitary and other measures were judged on their rationality in terms of this local knowledge. The working class did not share the one dimensional environmentalism of the sanitarians; instead they contended that many other factors were determinants of health, not least wages and hours of work. Thus, to understand public health 'from below' we have had to go beyond the Chadwickian agenda of filth, foul air and legislation, and explore rights and responsibilities, popular understanding of urban ecology, and food, shelter and fatigue. There was then in the four towns two mutually uncomprehending cultures which often saw the urban environment and the determinants of health quite differently.

5.2.4 CHOLERA AND SANITARY REFORM

There is now a view based on studies of national legislation and action that cholera was not the sanitary reformers' best friend. Also, historians now agree that the history of nineteenth century public health and sanitary reform, at least in the period 1848-66, should not concentrate on national developments, but those at the local level. The question must then be asked again, was cholera the local sanitary reformers' best friend? The answer is again no, but this has to be qualified in several ways. The official response to cholera was mostly short-term measures - crisis actions for a crisis. The main legislative instruments through which action was taken - the Nuisance Removal Act and the later the Nuisance Removal and Disease Prevention Act - required temporary measures only. These Acts, implemented largely through Boards of Guardians, were also the basis for much routine sanitary work and their importance has been overlooked by historians who have too often concentrated on the Acts which attracted most political controversy. In Sheffield after 1849 and Bradford after 1854, the 'success' of temporary measures worked against permanent improvements. However, cholera was on occasions a catalyst for administrative reform or specific improvement projects, for example, after the 1849 crisis local government reform in Hull and the new drainage scheme in Leeds. It would be claiming too much to say that cholera the local sanitary reformers' best friend, it was an ally which in certain circumstances could be a valuable ally and in others redundant. However,

this study has once again confirmed that the disease remains a valuable friend to historians wishing to explore the social history of medicine and health in mid-nineteenth century Britain.

1. British Medical Journal, (B.M.J.), 1871, ii, 221.
2. A.S. Wohl, Endangered Lives: Public health in Victorian Britain, 1983, p. 159. It combined in one body the Poor Law Board, Local Government Office and the Medical Department of the Privy Council.
3. BPP 1872 (340) XLVII 437, Mr Radcliffe's Report to the Local Government Board on the recent Diffusion of Cholera in Europe. Also see: D. Fraser, The Evolution of the British Welfare State, 2nd edition, 1984 p. 75
4. Practitioner, ii, 1873, p. 291. Where it is said that in view of the threat of cholera, no part of the act was more important than Clauses 20 & 21 which set out the constitution and duties of P.S.A.s. It should be added that they also helped to overcome the sort of administrative confusion which threatened to disrupt the preventive programme mounted in Hull in 1866
5. ECH, 27.7.1871
6. Ibid., 3.8.71.
7. BMJ., 1871, 2, p. 158. Also see, Ibid., p. 221, which records that local magistrates took a dim view of attempts to evade Medical Inspection and whenever necessary imposed the maximum fine of £70 on offenders.
8. ECH, 5.8.1871, 12.8.71 & 10.8.1871.
9. ECH, 24.8.1871; 31.7.1873
10. Lancet, ii, 1873, 53.
11. See for example, J.M. Furness, Record of Municipal Affairs in Sheffield Since The Incorporation of the Borough in 1843, 1893, p. 172. This describes how the Council approved plans to promote the better cleansing of the town.
12. BPP C-3208 Forty Third Annual Report of the Registrar General for Births, Deaths and Marriages in England, p. lxx-i.
13. J.L. Brand, Doctors and the State; The British Medical Profession and Government Action in Public Health, 1965, p. 43
14. J. Wight-Mason, Report on Health of the Borough of Kingston Upon Hull for the year 1883, 1884, p. 40. Also see: Report ... for the year 1884, 1885, p. 37, which records that in the year ending Dec 31st 1884, a total of 2,346 ships were subject to inspection. Of these, 272 were found to be in an insanitary condition

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15. Hull News, 12.7.1883.
 16. Lancet, ii, 1883, 607.
 17. Brand, op cit note 13, passim.
 18. W. Coleman, 'Koch's Comma Bacillus: The First Year', Bulletin of the History of Medicine, 61, 1987, 315-342.
 19. N. Howard-Jones, The Scientific Background to the International Sanitary Conferences, 1851-1938, 1975.
 20. Lancet, ii, 1884, 285, 513, 928, 1061.
 21. R. Lankester, 'The truth about Koch's cholera germ', Pall Mall Gazette, 6 June 1884, 1-2. Also see: J Burdon Sanderson, 'On Cholera', British Medical Journal, i, 1885, 1076.
 22. 1884 [C.3996] LXXXVIII 413, Further Report respecting the Cholera Epidemic in Egypt and the Proceedings of the German Scientific Commission
 23. Howard-Jones, op cit note 19 above, pp. 23-46.
 24. M. Harrison, Public health and medical science in India, c.1860-1914, Unpublished PhD dissertation, University of Oxford, 1991
 25. R. Evans, Death in Hamburg: Society and Politics in the Cholera Years 1830-1910, 1987, p. 582.
 26. PRO MH 55, 896. F.W. Barry of the L.G.B. was highly impressed by this response, stating that 'It would be difficult to speak too highly of the energy displayed by this P.S.A.'.
 27. J. Wright-Mason, County Borough of Hull: Annual Report of the M.O.H., 1892. p. 57.
 28. Hull and East Yorkshire (and Lincolnshire) Times, 27.8.1892.
 29. Eastern Morning News, 21.9.1892.
 30. Hull Daily Mail (HDM), 25.7.1893.
 31. HDM, 24.8.1893.
 32. Wright-Mason, op cit note 23 above, p. 45.)
 33. *ibid.*, pp. 48-52. For the special precautions see, HDM, 4.9.1893. These included seeking prompt medical treatment, boiling water and avoidance of certain foods.
 34. Yorkshire Post, 1.9.1893.

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35. For Leeds see: J. Cameron, Annual Report Made to the Urban District Sanitary Authority of the Borough of Leeds for the Year 1893; For Bradford see: HDM, 6.9.1893.
36. SRI, 11.8.1893. Also see Furness op cit note 11 above, p. 495. The Council allowed the Health Committee £5,000 over and above its normal spending limit 'for the purpose of taking such steps as might be necessary in the fight against cholera'.
37. Practitioner, 103, 1894, p. 381.
38. Wohl, op cit note 2 above, pp. 77-8.

ARCHIVAL SOURCES

Public Record Office

PRO MH 12

PRO MH 13

PRO MH 55

Local Records

Bradford

Town Council Minutes, 1848-1866

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