

## Review Article

---

### Death in the time of cholera

Gerry Kearns

PATRICE BOURDELAIS and ANDRÉ DODIN, *Visages du choléra* (Paris: Belin, 1987. Pp. 168. FF80.00)

PATRICE BOURDELAIS and JEAN-YVES RAULOT, *Une peur bleue: histoire du choléra en France 1832–1854* (Paris: Payot, 1987. Pp. 310. FF190.00)

FRANCOIS DELAPORTE, *Disease and Civilisation. The Cholera in Paris, 1832* trans. from the French by Arthur Goldhammer and with an introduction by Paul Rabinow (Cambridge, Mass. and London: MIT Press, 1986. Pp. xvii + 250. £22.50)

RICHARD J. EVANS, *Death in Hamburg: Society and Politics in the Cholera Years 1830–1910* (Oxford: Oxford University Press. 1987, Pp. vii + 676. £55.00)

REINHARD SPREE, *Health and Social Class in Imperial Germany. A Social History of Mortality, Morbidity and Inequality* trans. from the German by Stuart McKinnon-Evans (Material Word) in association with John Halliday and with an introduction by Paul Weindling (Oxford, New York, Hamburg: Berg, 1988. Pp. 246. £25.00)

The study of urban health and its determinants contributes to work on the costs of industrialisation, the growth of the modern state and the place of medical metaphors and medical power in society. The links between these questions present intriguing challenges for interdisciplinary studies. The works reviewed here take up many such challenges.

For the nineteenth century, the measurement of the health of people living in industrial areas comes down almost entirely to the study of mortality: by residence, age, sex, cause and occupation. Certainly, there is a large urban-rural gap in mortality during the early-modern period and through the early stages of urban-industrialisation, closing in many rich countries by the 1920s. There are also changes in the nature of that mortality, both its level and annual variability fall over time. Spree notes that in 1876 mortality in 22 large Prussian towns was greater than general Prussian mortality for all age-groups except 10–15 and 20–25 year-olds, but that by 1900 there were many more age-groups for which mortality in these cities was lower than in Prussia as a whole (pp. 39, 192).<sup>[1]</sup> He claims that the infectious diseases which so exercised contemporaries were less important in the aggregate mortality than might be expected and that the most

significant change in the last quarter of the nineteenth-century was a decline in the proportion of deaths due to respiratory diseases (it fell from 45% to 33%, p. 45). The stability of mortality increased as the importance of epidemic diseases declined. Evans writes of a cholera epidemic in Hamburg (1892) with a death rate of 15 deaths per thousand persons living; Delaporte of one in Paris (1832) with a rate of 23 per thousand and Bourdelais and Raulot of two in France with rates of 3 (1832) and 4 (1854) per thousand. For comparison it may be noted that Spree gives a total crude death rate for Prussia of 28 per thousand in 1876 and 22 per thousand in 1900. The urban cholera mortalities, then, are comparable to the total Prussian rate of mortality at the close of the century; and other equally distressing cholera could be mentioned for various cities: Paris 1849 (19 per thousand), Stockholm 1834 (45) and 1853 (30).<sup>[2]</sup>

Reinhard Spree gives a good account of the broad outlines of urban mortality yet there are several gaps and shortcomings in this presentation of his work. The translation, perhaps, is to blame for a disturbing lack of precision in the way data in tables are described in the text.<sup>[3]</sup> Maybe the publishers are to blame for a decision to exclude the basic tables of cause- by age-specific mortality rates on which chapter one is based, making the discussion more difficult to follow than it might have been. The most striking mortality data presented by Spree relate to infant mortality rates.<sup>[4]</sup> In a graph (p. 65) and a table (p. 195) Spree shows the diverging trajectories of infant mortality rates for separate social classes over the period 1877–1914. The rates among the different social groups started to decline at different dates and with varying speeds, earlier and more rapid decline occurring among groups which began with relatively low mortality. In this way the social differential widened over time. But when he looks for the causes of this gap he finds a set of factors which differentiate the population even more clearly than do the average rates for separate social classes. Within Liepzig in 1875 the overcrowded streets showed an infant mortality rate three-and-three quarters greater than the least crowded streets (p. 61). Even this geographical gap pales alongside some of the measures of the impact of breastfeeding on an infant's chances of survival. For Berlin in 1885 the infant mortality rate among children receiving artificial foods was six-times greater than for children who were only breastfed (p. 73). In other places the gap was somewhat less. It is clear, then, that in some cases geographical and nutritional facts exerted a more direct influence on the likelihood of a baby living to see its first birthday than did the social class of its parents. In fact, though, feeding practices did not vary greatly between social groups, only the richest 2% had markedly lower levels of breastfeeding (40–50%) but for the rest the variation was quite small (64–72%) (p. 197) and there was a clear class-gradient within feeding groups. Furthermore, the geography of overcrowding within a city is in part simply a more direct reflection of economic situation than are the broad social classes given for the whole of Prussia.

Infant mortality is related both to specific factors (feeding practices) and more general ones (such as cleanliness). From a study of infant mortality it is difficult to specify the general determinants of mortality and in this respect one must be cautious of attempts to present infant mortality as an especially precise indicator of healthiness, rather infant-care and -feeding must be seen as primary filters which expose the young to a greater or lesser degree to the hazards of the environment. Unless one can control for these primary factors, then it is to variations over time in the mortality of other age-groups that one should look

for the direct effects of broader changes in diet and cleanliness. Diet is certainly the most common catch-all explanation offered for changes in mortality. Spree notes that the mortality improvement of the last quarter of the nineteenth century coincided with an improvement in the standard of living (p. 145). Whether this correlation holds for the differential mortality histories of various social groups in different places has yet to be demonstrated. Indeed, Spree expects the dietary improvement to have been synchronous for all age-groups yet finds that their respective mortalities declined at different times.

Urban authorities and central governments had various strategies open to them for dealing with the public health which were suitable for the fight against different sorts of diseases. Diseases might be excluded by quarantine, their breeding grounds cleaned up with new drainage, sewerage and water-supply systems, the sick could be treated in hospital and against smallpox people could be vaccinated. Amid a very rich description of the social and political context of public health measures in nineteenth-century Hamburg, Richard Evans covers all of these. He shows that each was related to issues which directly affected the economic interests of taxpayers, merchants, landlords, property-owners, artisans and labourers. The success with which each strategy was pursued was influenced by the local balance of class forces at the time it was proposed. In Hamburg an haute-bourgeoisie of merchants dominated a city of low taxes and great poverty (perhaps 60–70% of the population were poor, p. 73). In this, the world's fourth port, there was certainly hostility to quarantine and *cordons sanitaires*. The key term in the ideology of the local merchants was "liberalism", its stark opposite "interventionism". In the name of liberalism quarantine was branded a restriction on free trade, housing regulations an attack on builders' rights (p. 516). A general meanness pervaded all discussions about state expenditure (p. 39). Liberalism was close to fatalism and few contingency plans existed for a cholera epidemic in the Hamburg of 1892. Almost every conceivable public health measure was abandoned to liberalism. The results were painfully obvious. When cholera arrived in 1892, the authorities continued to deny its presence in the liberal hope of not disrupting trade but with the inevitable consequence of allowing the disease to spread. In contrast, interventionist Bremen quickly isolated early cases, thereby containing the disease (pp. 301–4). For economy's sake, the extravagance of a filtered water supply was set by, typhoid came in epidemic waves through the 1880s rendering Hamburg much worse in this regard than London (pp. 191–4). In 1871 unvaccinated Hamburg received smallpox from soldiers returning from war, its death-rate from smallpox that year (15.4 per thousand) was two-and-a-half times that of any other German city (p. 223). The reluctance to build hospitals made the isolation of early cases of epidemic disease almost impossible and the cholera epidemic of 1892 stands testimony to the failure of the hospital and sanitary revolutions in the city.<sup>[5]</sup>

Evans provides a fine study of the material basis of liberalism in Hamburg as well as an account of the economic and political constraints on the dominance of the haute bourgeoisie within the town. In this regard two issues were crucial: the extent of the state franchise and the use of legitimate force to suppress illegitimate, "socialistic" opposition. From the 1860s the Hamburg bourgeoisie jealously guarded its relative autonomy within the German Confederation and was thus more inclined to solve its local problems without calling on external military force (p. 88). Consequently, an attempt was made to incorporate the

lower middle class into the ruling alliance, they were enfranchised, giving “the state a built-in representation of the interests of middling and petty-bourgeois landlords which often ran counter to those of the mercantile community” (p. 105). Time and again the interests and allegiance of this petty-bourgeois group turn out to be crucial in the story of public health measures. The “fraction of capital”, as Evans would term it, frequently dominated local government franchises and it was the interest most likely to be harmed by moves against the owners of insanitary properties. Spree picks up the same theme. In the 1880s and 1890s, he suggests, the German state tried to drive a wedge between a lower-middle class of white-collar workers and a blue-collar working class: “All such measures aimed to improve middle-class access to the new kinds of institution that were enhancing or redistributing life chances in modern terms—higher education, improved health care and prevention of illness, social security against accidents, sickness or old age, and so on—in such a way that the opportunities the majority of the working class had of benefitting from them were curtailed” (p. 98). In this regard political power is used to shape what Spree calls status, creating a situation of greater security for some and concomitantly the possibility for them of adopting more forward-looking, or modern, rational attitudes of which a medical world-view was one, and one which doctors pushed at this group in order to create a market for medical services, a process of medicalisation (p. 176). At the same time the poor were preached at, “confronted . . . with what can be called the medical culture” (p. 180) before, much later, receiving the material benefits which allowed modern, rational, bourgeois values to become their guiding principles too. In these ways, public health questions may be central to the evolution of European urban class structures, the ideological interpellation of classes and the contradictory position of the petty-bourgeoisie, dirty villain and valued ally.<sup>[6]</sup>

There are difficulties in integrating existing public health histories into such broader accounts of medicalisation and the modern state. As for medicalisation, a predominantly positivist conception of science keeps many studies from charting the relations of knowledge and power in a way which is sensitive to the persistence of such relations. Consider, for example, the way historians have treated the links between medical theory and its socio-political context during the first European cholera epidemic (early 1830s). Bourdelais and Raulot stand in a long list of works which document the political pressures on doctors and suggest that ideology guided their adherence to contagionist or anti-contagionist theories only because properly scientific procedures were incapable of conclusively settling the question one way or another.<sup>[7]</sup> This simplifies the different levels at which “scientific” theories have to be adequate: from microbiology through to matters touching public order. More seriously, perhaps, it obscures the persistence of issues of power in medical practice and *thus* theory. The positivist conception consigns that vital legacy to the prehistory of modern medicine. In the case of cholera this means forcing a false separation between the misguided perceptions of contemporaries and the quiet autonomous march of science. This divorce also trivialises what is medical about the modern state and unconsciously repeats the medical profession’s own mythology. The medical model is implicated in our ideas of personal responsibility and the proper grounds for state intervention, as in “they are sick, it is not their fault” or “this is a sickness, a threat against which the collectivity has a right, even an obligation, to protect itself”. The medical profession’s mythology is that it is a disinterested body at the service of society and motivated primarily by scientific criteria yet as

a profession it has often been more narrowly concerned to cultivate and protect its economic situation.

The shortcomings of a positivist conception of science and a functionalist analysis of power were two of the main concerns of Michel Foucault's historical writings. Francois Delaporte adopts Foucault's concerns in a work on the Parisian cholera epidemic of 1832. The results are obvious. Where Bourdelais and Raulot see only truth and error, Delaporte sees the play of strategies. Quite simply Delaporte finds the medical theory of 1832 of interest in itself and not as a precursor of the present. Thus he sets out the contemporary alternatives with great felicity and identifies the forms in which arguments were pressed, in other words how they worked or failed to work at the time. The central term in Delaporte's account of the broader uses of medical theory is "the poor". The government did not directly respond to the facts of a new epidemic threat and thus its reliance on medical theory was not for the sorts of bacteriological reasoning modern science might claim to provide. The problem of "disease" is constructed by groups in society out of pre-existing ways of behaving: "The tactics employed to counter the epidemic or to reduce its virulence were adopted in response to issues that the government itself raised" (p. 8). The problem of cholera was defined as the threat of the revolutionary poor rather than as the likelihood of dying because in an atmosphere of general violence and distrust this seemed the more immediate danger. In return the poor took literally the references of bourgeois economists to "surplus population" and fought to resist the label "cholera" becoming one under which the state might take possession of their loved ones. If the problem was the management of the city, medical order and public order did not seem that different and, directly contrary to the retrospective judgements of modern epidemiology, the progressive medical thinkers adopted environmentalist (anti-contagionist) thinking. The question was to specify just how the poor were responsible for cholera, how social factors operated: did they die because they were poor (the social factors being what made them poor) or did they die directly as result of their moral failings? This was the ethical context in which cholera was a problem. The environmentalists treated social factors as an aspect of populations considered as groups, this was in contrast to contagionists who looked for individuals and first cases (p. 169) and the old theory of constitutions where the focus on natural factors such as topography and climate excluded a direct consideration of the social factors of the living space of the poor (pp. 83-4). Medical theory moved towards a direct confrontation with the poor's *genre de vie* and "the need to *import* into the exploited class a health apparatus forged by and for the bourgeoisie became evident—an apparatus, moreover, that remained the instrument of the bourgeoisie's hegemony" (p. 200). This sketch and the centrality of 1832 in the development it describes is suggestively rather than conclusively argued by Delaporte but it raises again the issue of medicalisation in a way which recalls some of Spree's more ambitious speculations. It allows us to return to the materials (cartoons, etc.) collected in *Visages du choléra*, not as mere *divertissement*, but as primary materials for the exploration of the history of medical power in society and of cholera as an event, an event which created the St Vincent de Paul Society, the Miraculous Medal and a vein of scatological political caricature which lasted until the turn of the century when cholera passed back to plague the role of society's dominant medical metaphor.

## Notes

- [1] This comparison is a little misleading since, as noted in the Table 2, the figures for 1876 refer only to males while those of 1900 relate to both sexes yet one of the most striking features of urban mortality in nineteenth-century Europe is the marked difference between the sexes with unmarried males having worse mortality than other groups. Indeed beyond speculating that worsening levels of tuberculosis among women relative to adult males during the last quarter of the nineteenth century may have been due to their increasing involvement in the workforce, Spree ignores gender issues altogether.
- [2] Paris 1849: deaths from R. Price, *An Economic History of Modern France 1730–1914 rev. edn.* (London 1981) p. 206; population from L. Chevalier, *La Formation de la Population Parisienne au XIXe siècle* (Paris 1950) p. 284. Stockholm: B. Zacke, *Kolera Epidemien i Stockholm 1834* (Stockholm 1971) p. 5.
- [3] For example: "... the chances that a working class child had of surviving fell in the course of the first twelve months, whereas those of children of public officials increased" (p. 71), does not mean that monthly mortality rates rose for the one and fell for the other group over the first year, rather that the ratio of the rates for the one group to those of the other were lower for the first month of life than for the next eleven taken together.
- [4] Even here imprecision introduces confusion. On page 61 the infant mortality rate is referred to in percentage terms in three different ways. The infant mortality rate is first defined as the percentage of births ensuing in death before the first birthday. Within a town the gap between the areas with highest and lowest infant mortality rates is given as the difference in the two respective infant mortality percentage rates. Then this gap is referred to as an excess mortality rate in percentage terms where this is the ratio of the absolute percentage gap to the lower percentage rate. Then in a supporting table (p. 193) the basic infant mortality rates are given as rates per *thousand* live births.
- [5] This cholera epidemic so clearly bears witness to the specific factor of Hamburg's lack of effective water filtration (p. 292) that paradoxically it ill serves Evans' purpose of using cholera to illustrate the general sanitary situation in Hamburg compared to other German cities at the time.

Because the citizens of Hamburg shared the same water-supply, more-or-less (Evans claims that as the pumping of water to the elevated bourgeois areas of the city was intermittent this may have afforded the rich some protection—p. 424), the geography of cholera within the city, argues Evans, reflects the underlying pattern of social inequality (p. 419).

He also reconstructs occupationally-specific death rates noting that: "most previous historians of cholera have been able to provide a breakdown of victims by occupation but have not followed this up by linking it to the whole population by occupation" (p. 433). This is certainly true—although, see: G. Kearns, *Urban Epidemics and Historical Geography: Cholera in London, 1848–9* (Norwich 1985). Evans' results, that domestic servants and workers in the docks were particularly at risk and that cholera unlike general mortality did not markedly avoid women, are interesting but there are some problems with his analysis (the details are given in an appendix, pp. 578–82). Of the 8,605 cholera deaths forming the basis of the study over half (4,497) are of dependants allocated on the death certificate to the occupational group of the head of household. There is an overlapping group of about two-fifths where an imprecise description of the occupation of the head of household is given—"no trade" (296), "no trade given" (997) and "workers" (2,056). Only the first is a label which may be found in the occupational census of 1895 and "the figures in the cholera statistics for those with no trade or no trade given bore no relation to the kinds of people included in these categories in the 1895 census" (p. 580). These three groups were, he claims, reallocated (it would appear from the table that only two of the groups were reallocated, "no trade" remaining in both the cholera lists and the occupational groups). This gave him deaths which could be related to a population at risk from the occupational census which also allocated the entire population on the basis of the occupation of the head of household. But, are each of these occupational groups equally likely to head households or have families of a given size? Evans concedes that fertility might vary between groups so that the age-structure will differ with direct consequences for aggregate mortality and he even notes that domestic servants "were predominantly young and unmarried" (p. 579)—i.e. less likely to have any dependants at all. Two-fifths of the deaths were of the under-fives or over-fifties (p. 445) and these age-groups were the ones with death rates of over 15 per thousand (p. 446) so that this is quite a serious problem and might have more than "a relatively minor effect on the overall distribution of cases" (p. 579).

Turning, briefly to the 3,053 deaths (“workers” plus “no trade given”) which Evans redistributes. First, this means that fully one-third of the occupation descriptions in the list of cholera deaths are Evans’ (Bourdelaïs and Raulot construct *all* their cholera mortalities because they distrust the official figures and thus choose to say that all the above average mortality in each département month by month during the cholera years in France was in fact cholera). Second, Evans assumes that the “true” distribution of these poorly specified deaths lay solely with the groups of manual labourers in each trade and he then uses their contribution to the industrial sectors in the 1895 occupational lists to share the deaths out. This gives a distribution by sector rather than status which is interesting in itself but it does so by introducing the counter-intuitive notion that manual labourers in each sector had the same mortality (otherwise the reallocation might have been done on the basis of the distribution of known deaths). In part, then, the new sectoral rates reflect the degree to which each sector is characterised by manual labour, confounding sectoral and status variables. Perhaps nothing more was possible but it makes ironic Evans’ claim that “The 1892 Hamburg figures are by far the best for any epidemic in the nineteenth-century” (p. 571).

- [6] Manners maketh the petty-bourgeois bourgeois but wealth keepeth them petty. One of the main problems with Spree’s fascinating sketch is that it makes rational attitudes bourgeois and modern as such and the introduction of those ideas to the working class an educational before it is a political or material question. Yet this is to ignore the very strong traditions of self-help within working-class institutions, albeit forms which, in privileging the middle class, the state may frequently have undermined.
- [7] “C’est bien cette insuffisance théorique qui a souvent permis d’interpréter en des sens opposés les mêmes séries d’observations, qui a ouvert l’espace de liberté indispensable à l’inversion” (p. 72). One epidemiologist alone is treated by them in a different way: Moreau de Jonnés. Bourdelaïs and Raulot appear to be still fighting the good fight of the contagionists of the 1830s. Because de Jonnés was a contagionist, the correct modern position, and because he was not of the medical élite (and thus presumably untainted by corrupting social influences), his work is repeatedly praised by Bourdelaïs and Raulot (e.g., p. 67). Using historical archives and modern epidemiological theory they want to go back and congratulate the sage and criticise the mistaken epidemiologists of the past’ “Grâce à des documents précis, et en tenant le grand compte des hypothèses actuelles, l’historien peut intervenir dans les débats des savants médecins et préciser les pistes qu’indiquent les observations qu’il a rassemblées sur les épidémies du passé” (p. 153).

For a long time, they note, water was seen as the primary vector of cholera and other factors, such as the sweat in clothes, were ignored. More recently, perhaps, there has been a tendency to ignore water altogether which is going too far: “. . . attitude excessive dans bien des cas!” (p. 159). Yet, elsewhere we find the astonishing suggestion that the Broad Street pump handle was itself the vector with which Snow interfered in 1854 (Bourdelaïs and Dodin, p. 79). What about the unfortunate lady who drank bottled Broad Street water and died and what about the fact, embarrassing to Snow too, that the local epidemic was in decline before the handle was removed?

Yet this does not exhaust their use of the past as a laboratory. Tchaikovski killed himself with contaminated water in the 1893 St Petersburg epidemic. His mother had died of cholera in 1850 which Bourdelaïs and Dodin take as evidence of a genetic predisposition to low resistance to the disease: “Exemple ancien d’un facteur d’origine génétique, qui paraît aujourd’hui de plus en plus assuré” (p. 161). The difficulty of conducting properly controlled epidemiological experiments with historical data are obvious but the certitude of modern epidemiological knowledge encourages a rather cavalier approach. For two communes of Seine-et-Marne in 1832 Bourdelaïs and Raulot have information on cause of death in the parish registers. The combined population of the two communes was 807 and there were 33 cholera deaths, 25 of which came from 8 families: “La proportion est alors énorme!” (p. 173). In the case of only one family do they have deaths from more than one generation yet they confidently conclude that the importance of genetic predisposition is proved. They dismiss as unlikely the possibility that interpersonal contact within the home explains the clustering of deaths within particular households—why?

Time and again the certainty of modern knowledge actually corrupts their analysis of the past. With good reason their book concludes by noting that the cholera pandemics of the nineteenth century bear witness to the transport revolution, stirring people up and moving them around. Yet Bourdelaïs and Raulot’s contagionism seems to require but one unfortunate individual to start a full-blown epidemic. And now comes the ultimate irony, the unbelievable claim that trade, troops, etc., important elsewhere, were irrelevant in the France

of 1832—the cholera was instead spread by doctors, going to epidemic centres they brought the disease to France, then visiting Paris for instruction they took it back to the Provinces: “Par leurs nombreuses missions de 1831 et 1832 en Pologne, en Russie ou à Sunderland, les médecins français, réputés dans toute l’Europe et impatients de se mesurer au spectre asiatique, se sont transformés en agents d’infection” (p. 162).