

## Epidemics and History: Disease, Power and Imperialism

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Reflections on the history of medicine in the second half of the twentieth century make much of the discipline's break with its association with the history of science, and the development of the new approaches and interests signalled by the coming of the 'social history of medicine'. How 'new' the social history of medicine actually was is debatable, but there can be no doubting the proliferation of work on topics such as patients, non- orthodox practitioners, madness, and healing and disease outside of Western cultures. Also, previously well-worked seams, such as the development of the medical profession and medical science, have been the subject of new studies and major revisions. A characteristic of much of the new work, following from its attempt to set medicine in its specific social context and its reaction to older universal histories, has been its relatively narrow focus in time and place. There are many recent studies of doctor-patient relations as revealed in casebooks or diaries, of alternative healers in particular towns, of individual asylums, and of health and medicine in specific regions or countries. A popular theme in this vein has been the history of epidemics, which has allowed historians to focus on a particular place and time, and to explore the social context of disease and medicine at a moment of social crisis. In turn, this approach has spawned a relatively new genre of the history of disease, where medical historians consider a disease over a longer period, weaving changes in understanding and management with epidemiological and cultural history. The emphasis in the new social history of medicine has very much been on the 'social' in medicine and how the wider 'society' impacts upon medicine. There have been fewer studies of the 'impact' of medicine on society, except for work around medicalisation and on how changing medical views of the body and disease have interacted with popular and elite beliefs. Particularly thin on the ground have been studies of the impact of medicine on morbidity and mortality, and beyond that investigations into the part played by diseases, or medicine, or both together, in shaping wider historical changes. This situation is in part a reaction to earlier histories of medicine that assumed changes in the medical understanding of disease automatically converted into progressive preventive or therapeutic results. Also influential has been the work of Thomas McKeown on population growth in modern Britain, who is generally read as maintaining that medical intervention had next to no influence on the fall in death rates in industrialised countries until well into the twentieth century. It should not be forgotten either that the deeply contextualised work in the social

history of medicine has shown the relationships between disease, medicine and social changes to be very complex, even at the micro-level.

However, the tide is now turning and in the last five years a number of historians have returned to the write 'big picture' histories. Deservedly the best known is Roy Porter's *The Greatest Benefit of Mankind* (1998), a comprehensive, accessible and authoritative survey of Western medicine from antiquity to the present. Synoptic accounts have been offered in collections in the Cambridge and Oxford History series, and by J. N. Hays in *The Burdens of Disease: Epidemics and Human Responses in Western History* (1998). Thus, in many ways Sheldon Watts's *Epidemics and History: Disease, Power and Imperialism* is very much of its time, a 'big picture' history of disease focusing on medicine and public health in non-Western countries. It is major work of synthesis that develops in successive chapters histories of plague, leprosy, smallpox, syphilis, cholera, yellow fever and malaria. Overall, the volume is a remarkable achievement and is packed with detail on regions and the epidemics that are not well known to historians of medicine or disease. The author's accounts of disease control measures in Muslim countries is particularly welcome. *Epidemics and History* is a very ambitious volume, where the main theme is the role of imperialism in creating the conditions in which major epidemics developed, and the weak responses that colonial governments made to these problems. Nothing that I say below should detract from my admiration of Watts's work, but there are issues in his approach that deserve critical comment and the accounts of the various diseases do not always match its ambitions.

*Epidemics and Disease* is based on assumptions that most social historians of medicine will be uncomfortable with. There are three issues that are particularly troublesome and these can each be linked to one of the themes in the subtitle: Disease, Power and Imperialism. The first is Watts's decidedly presentist approach to medical knowledge and his wish to separate the 'true' character of a disease and 'disease Constructs'. Watts defines the latter as the culturally filtered, false, even delusional, perceptions of diseases that were developed by the agents of imperialism. Watts acknowledges that science and culture are rarely, if ever, distinct realms (p. 122), but continues to work with a clear distinction between 'the real world of objective fact' (p. 139) and culturally mediated perceptions. The objection to this viewpoint is that historians have repeatedly shown that medical knowledge and practice are 'constructed' and are culturally mediated. However, they make this point not in any pejorative sense, but because medicine was and is created by humans from available intellectual and material resources, and validated through practical actions and social interactions. One could also add, of course, that the social and cultural world was and is no less 'real' than the material world and that medical knowledge changes historically; today's hard facts may be tomorrow's errors. As we will see, state-of-the-art medicine on epidemics in the first half of the nineteenth-century was miasmatic and it was the beliefs of contagionists that were said to be 'bogus' and in retreat. Second, Watts tends to overstate the power of Western imperialist countries and their agents, and underplay their lack of knowledge, the resistance they met to their schemes, and that contingent outcomes of many policies and programmes. The notion that public health programmes were driven, across centuries and continents, by an 'Ideology of Order' begs more questions than it answers. The third and related problem is the use of the term 'Development' for the whole of Western contact with other cultures, including colonial imperialism. The objection is not so much to the anachronistic term, but to the simplification of processes and motives that historians of imperialism have always presented as complex and variable.

There are additional problems, many of which stem from the author's ambitious scope. Some chapters are quite rambling and lines of argument remain implicit; thus, narratives often peter out and there are few clearly stated conclusions. All of the important diseases have been covered, and while historical epidemiology is very good, there is no explanation of why particular epidemics and regions have been chosen. Also, there is little sense of epidemics as moments of crisis, hence this volume is really about communicable diseases and history, and in my view rather the better for this.

Watts's narrative begins with the Black Death in 1347, by considering the absence of a public health responses in Europe before 1450, why formal control policies first developed in Italian states after 1450, and concluding with a discussion of the disease in American and British empires after 1850. The importance of religion in initial reactions to the plague is shown well, as are medieval assumptions about disease and its

treatment. The account of plague control in fifteen and sixteenth century Europe is very detailed, but jumps from country to country and disappointingly offers no conclusions the patterns and determinants of control measures. Then the story jumps to the Middle East and the fourteenth century and after, with fascinating detail of the evolution of little known medical and disease control practices in Muslim countries. The chapter ends with the story of how, in the early nineteenth century Egypt, Muhammad Ali devised a state apparatus and disease control measures based on quarantines, that, despite the best efforts of the British anti-contagionist to thwart them, helped control the disease when implemented. The implicit argument here is a version of Ackerknecht's linking of disease control strategies to political ideologies. Thus, Muhammad Ali's regime with its 'Ideology of Order', against the advice of its wonderfully named advisor 'Dr Clot, \_ a miasma man' (p. 37), favoured contagionism, while the British, committed to *laissez faire*, opposed such measures.

The chapter on leprosy jumps from the Middle Ages, to fourteenth century leper hunts in Europe, and then to Hawaii and the British colonial Empire in the nineteenth and twentieth centuries. It is with leprosy that the 'Construct' versus 'real' disease theme is most fully developed. Indeed, two Constructs of leprosy are identified: that of the 'leprosy as moral impurity [and] imagined disease', and a second Construct, also around impurity, with the added imperative towards the incarceration of sufferers. Against these two Constructs, Watts sets 'leprosy as Hansen's disease, i.e., clinically true leprosy'. (p. 41) The problem here can be shown by looking briefly at the reception of Hansen's bacillus. In the 1860s and 1870s, up-to-date medical opinion in Britain and its colonies, in line with anti-contagionism, moved towards leprosy being non-contagious and influential reports came out against segregation and isolation. Hansen's bacillus took many years to be accepted, and it was incorporated into a very complex aetiological and pathological picture. Leprosy was not highly contagious, hence the dominant metaphor in medicine for explaining and managing the disease was 'seed and soil': the disease required both the bacillus, in sufficient numbers and suitable virulence, and a vulnerable human constitution, which was dependent on general health, race, behaviour, inherited vulnerability, and many other factors. The Hansen bacillus was not associated with a definitive post-Koch, ontological account of the disease, that in turn defined necessary control measures. Rather, different groups within and without medicine gave it a variety of meanings; for example, some doctors argued for isolation to prevent the spread of the germ, while others maintained that the best way forward was to work for social and sanitary improvements to strengthen the human soil. Both views, and others, were legitimate deductions from available knowledge and debated as such. Which approach won the policy argument depended on a host of factors (power, interests, evidence, etc.) and then actual implementation might be shaped by other factors (economics, politics, logistics, etc.). Seen in this way, the different actions of governments and missionary agencies can be explained not as a conspiracy, but the result of negotiations at all levels. 'Constructs' were as much a part of medical discourse as political ideologies and cultural beliefs, indeed, the notion of separate spheres in unhelpful. Indeed, given the switch back to contagionism at the end of the nineteenth century, the government and missionary doctors who worked most closely with lepers, and had the greatest chance of catching the disease, often had the greatest investment in both of the leprosy Constructs identified.

With smallpox, Watts develops an important revisionist argument on virgin soil epidemics, that is a valuable corrective to recent writing on the subject. It has become commonplace in global histories of disease to explain the high mortalities of indigenous peoples after European arrival to the importation of diseases to which indigenes had no immunity. Thus, we read repeatedly of smallpox, measles, chickenpox, etc. taking a terrible toll, often decimating indigenous populations. The problem with such claims is the extent to which they imply that Europeans had specific inherited or racial immunities to these diseases. The way the human immune system is currently understood to work is that humans are born with no specific immunities, but with a general immune capacity, which allows them to respond to the billions of potential chemical and biological dangers that might enter the body. In this sense, every human is born a virgin soil baby. Specific immunities are acquired from exposure to pathogenic matter from birth onwards, aided initially as Watts points out with maternal antibodies. With some diseases, specific immunities can be 'stored' and give lifelong protection, with other diseases this capacity is relatively weak. Thus, if there was differential immunity between European colonists and indigenes, say, in the American colonies in the sixteenth century, this was due to the prior exposures that Europeans had to pathogens and the extent to which they had

acquired immunities. It should not be forgotten either that European children continued to die in large numbers from the very same diseases that were killing indigenes. Also, many indigenes survived imported diseases, not as a result of a Darwinian survival of the fittest, but because time they were able to combat infections and acquire immunity. In this context, it is worth stating that many factors led to the high death rates amongst indigenes, such as, social dislocation, displacement, loss of lands, starvation, direct killing and diseases. All of this better informs the central paradox of the story for Watts, namely, that the conditions that led to the poor health of indigenes had been created by European imperialism, yet, the dominant assumption in European medical and lay beliefs was this that it was due to other factors, their racial weaknesses, cultural backwardness, ignorance and immorality.

The chapter on syphilis covers the debate on its supposed importation from the New World, how its incidence was affected by changes in social relations and urbanisation in Europe, anti-masturbation in the eighteenth century, the controversies over the regulation of prostitution, and the disease in China. It is in this chapter that the Construct - Reality distinction leads Watts to claim to be less historical than Foucault!

But in my hands, unlike those of Foucault, the word "knowledge" is usually synonymous with false knowledge of "the earth flat" variety. Sometimes, when drawn from the fount of ancient wisdom (Plato, Aristotle, Galen), this false, flat-earth knowledge was well-intentioned ignorance. On other occasions it was an act of duplicity deliberately practised to reinforce authority. (p. 124)

Fortunately, such assumptions only intrude now and again into the main narrative of the chapter, as the author continues to his usual synthetic aplomb.

The final chapters are the best in the volume, being more focused and set in specific imperial contexts. *Cholera and Civilization: Great Britain and India, 1817 to 1920* tells the story of cholera in India before and after the Rebellion on 1857 and links this with the experience of the disease in the metropole. However, much of this chapter is concerned with the social and economic history of each country, which unfortunately are only erratically linked to specific epidemics and their management. For example, when discussing the disease in India after the Rebellion, Watts details deteriorating social conditions and other changes that made the spread of cholera much easier, but these are not linked to specific cholera outbreaks or new issues such as pilgrimages. My reading is that the reluctance of the Anglo-Indian medical community to accept Koch's cholera vibrio was well-grounded in the 'facts' and that the choices between different sanitary policies were openly debated.

The discussion of yellow fever and malaria in chapter 6 is very detailed, and prefaced by an interesting account of the modern understanding of the aetiology and pathology of both diseases. This information is very useful in the reconstruction of the epidemiology of both diseases, though there must always be doubts about whether seventeenth century 'Yellow Jack' equates exactly with the modern disease. The juxtaposition of the discussion of both diseases in Barbados, Haiti, the United States, Brazil and Cuba is fascinating and brings together well recent work by Margaret Humphrys, Ilana Lowy, Marcos Cueto and many others. What these show, of course, is that the nature of the disease underdetermined human responses, and that public health policies were highly politicised. Indeed, political problems increased after the achievements of Carlos Finlay, Walter Reed, and William Gorgas massively raised expectations in colonies and the metropolis over what tropical medicine could achieve. In discussing tropical medicine in West Africa, Watts rightly points to the role that medical advice played in the establishment of residential segregation, though fear of malaria was not the only factor. Moreover, it is ahistorical to suggest this advice was based on 'bogus science' (p. 261-2) as John Cell has shown it reflected one reading of the contemporary understanding of the aetiology of malaria and was never exclusive, but linked with other measures as quinine prophylaxis, netting, screening

houses and drainage.

The 'Afterword' is exactly what it says it is and not the concluding discussion I had hoped for. However, implicit in the 'Afterword' are the two main themes of the book: (i) that Western colonial imperialism created or has worsened many of the disease problems of the what is now the Third World; and (ii) that the disease control measures deployed directly or indirectly by Western agencies to meet these problems have in many instances been inappropriate. Few historians of Empire or medicine would disagree with either claim, though they would want add many qualifications and make the points in a less judgmental way. First, ideas and policies are only obviously 'inappropriate' with hindsight and from particular viewpoints; when introduced they were based on the best knowledge available, not 'pseudoscience' or 'bogus science'. Second, public health policies were developed in terms of judgements of what would 'work' and be 'appropriate' to political, economic or social objectives at the time. Thus, it is hardly surprising that late nineteenth century doctors, convinced of the superiority of white European civilisation and in West Africa to support the development of an export economy, developed the disease control policies they did. It is too easy and inappropriate to ridicule individuals and the agencies they worked for, the point for historians is to understand their circumstances and what made their choices 'appropriate'. It is perhaps worth emphasising that there were choices. Western medicine had within it many competing and changing ideas, which were given many different meanings, and could in turn be used to support distinct programmes and policy objectives. For example, from the 1900s it has been understood that malaria control could concentrate on attacking the parasite in humans, trying to kill mosquito vectors, breaking mosquito-human contact by anything from netting for individuals to resettling peoples, removing the environments where mosquitoes breed and live, or improving general levels of health, sanitation, diet and well-being. Also, what was 'appropriate' also varied, not just between colonisers and colonised, but between centre and periphery, government and private ventures, between different private ventures, between missionaries and governments, and between experts. Which returns me nicely to my initial points about the complexity of the histories of disease, power and imperialism.

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