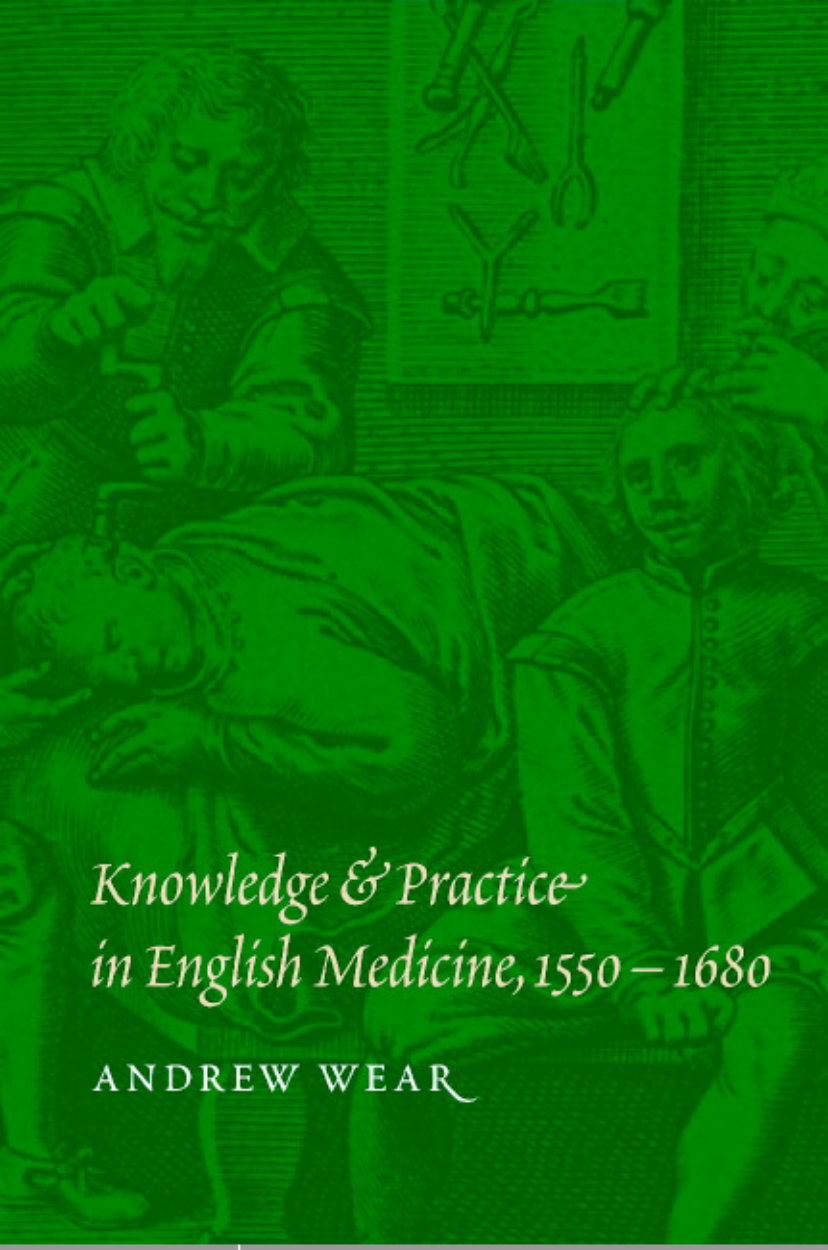

Knowledge & Practice in English Medicine, 1550–1680

ANDREW WEAR

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This is a major synthesis of the knowledge and practice of early modern English medicine in their social and cultural contexts. The book maps out vividly some central areas: remedies (and how they were made credible), notions of disease, advice on preventive medicine and on healthy living, how surgeons worked upon the body and their understanding of what they were doing, and the prevention and treatment of plague.

The structures of practice and knowledge examined in the first part of the book came to be challenged in the later seventeenth century, when the 'new science' began to overturn the foundation of established knowledge. However, as the second part of the book shows, traditional medical practice was so well entrenched in English culture that much of it continued into the eighteenth century. Various changes which set the agenda for later medical treatment did, however, occur, and these are discussed in the final chapter.

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In memory of my grandfather
Spiridon A. Malaspina
1890–1983

Contents

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Introduction

Anthropologists used to spend years immersing themselves in the life of small foreign communities in order to bridge the unbridgeable cultural gulf that existed between themselves and the people they studied. What they did with that transfer of cognition lay usually along a spectrum represented at one end by the persona of the naïve observer who tries to retell to the home audience what the alien society is like, and at the other by the theoretician who draws upon the material he or she has collected to reconstruct social structures. Influencing all the points along the spectrum are the present-day concerns and interests of the anthropologist's own society.

Like the 'naïve' observer I have tried to recreate the knowledge and practice of that foreign culture: early modern medicine.[1] The subject has been strangely neglected whilst the new discipline of the social history of medicine has been redrawing and enriching our understanding of early modern medicine. Old Whiggish notions of concentrating solely upon what appears to be 'rational' and progressive in a modern sense have been abandoned, as has the emphasis on elite professional groups. Instead, demographic studies have uncovered the facts of life and death for the population, the experiences of patients, the poor and women have emerged to the foreground, and the wider cultural and political contexts to medicine have been explored.[2] The achievements of this new history of

[1] I make no claims to be an anthropologist, let alone one belonging to any particular school. The reference to anthropology is by way of analogy.

[2] On demography see, for instance: E. A. Wrigley and R. S. Schofield, *The Population History of England 1541–1871* (Cambridge University Press, Cambridge, 1989); M. W. Flinn, *The European Demographic System, 1500–1820* (Harvester Press, Brighton, 1981). On the relationship between geography and demography: Mary Dobson, *Contours of Death and Disease in Early Modern England* (Cambridge University Press, Cambridge, 1997). On patients and medicine: Roy Porter (ed.), *Patients and Practitioners* (Cambridge University Press, Cambridge, 1985); Roy Porter and Dorothy Porter, *In Sickness and in Health: the British Experience 1650–1850* (Fourth Estate, London, 1988), and *Patient's Progress: Sickness, Health and Medical Care in*

medicine have been immense. But it has not perhaps been able to capture so well the central aspects of medical knowledge and practice. In the very process of expanding and reshaping the boundaries of early modern medicine it has neglected what was for many people in the sixteenth and seventeenth centuries central to their experience of medicine: the treatments, explanations and advice that they were given. This is understandable as present-day interests such as the rights of patients or the growth in feminism have shaped the agendas of historians together with a general critical concern about the role of medicine in our societies. Such 'presentist' input has always acted to make historical writing relevant to its age; it has also had the potential to distort the past, as with the Whig history of the nineteenth century which reflected the driving ideologies of newly industrialised nations. Moreover, the social history of medicine has also tried to get closer to general history, partly because of the need within the field for recognition from the wider

England, 1650–1850 (Polity Press, London, 1989); see also Michael MacDonald, *Mystical Bedlam, Madness, Anxiety and Healing in Seventeenth Century England* (Cambridge University Press, Cambridge, 1981); Lucinda McCray Beier, *Sufferers and Healers: The Experience of Illness in Seventeenth Century England* (Routledge, London, 1987); Doreen G. Nagy, *Popular Medicine in Seventeenth Century England* (Bowling Green State University Popular Press, Bowling Green, Ohio, 1988); Matthew Ramsey, *Professional and Popular Medicine in France, 1770–1830: the Social World of Medical Practice* (Cambridge University Press, Cambridge, 1988); Mary Fissell, *Patients, Power and the Poor in Eighteenth Century Bristol* (Cambridge University Press, Cambridge, 1991); for a more anthropological view see François Loux, *Pierre-Martin de la Martiniere, un Médecin au XVII^e Siècle* (Imago, Paris, 1988), and for a later period: (with Phillipe Richard) *Sagesses du Corps* (Maisonneuve et Larose, Paris, 1978), and *Le Jeune Enfant et son Corps dans le Médecine Traditionelle* (Flammarion, Paris, 1978). On the poor see Margaret Pelling, *The Common Lot. Sickness, Medical Occupations and the Urban Poor in Early Modern England* (Longman, London, 1998). On women see: Barbara Duden, *Disembodying Women. Perspectives on Pregnancy and the Unborn*, trans. Lee Hoinacki (Harvard University Press, Cambridge, Mass., 1993), and *The Woman Beneath the Skin: a Doctor's Patients in Eighteenth-Century Germany*, trans. Thomas Dunlop (Harvard University Press, Cambridge, Mass., 1981); Antonia Fraser, *The Weaker Vessel: Woman's Lot in Seventeenth Century England* (Mandarin, London, 1993); I. Maclean, *The Renaissance Notion of Women* (Cambridge University Press, Cambridge, 1980); S. H. Mendelson, *The Mental World of Stuart Women* (Harvester Press, Brighton, 1987); Linda A. Pollock, *With Faith and Physic. The Life of a Tudor Gentlewoman Lady Grace Mildmay 1552–1620* (Collins & Brown, London, 1993); M. E. Wiesner, *Women and Gender in Early Modern Europe* (Cambridge University Press, Cambridge, 1993). More general books influenced by the new social history of medicine include: L. Conrad, M. Neve, V. Nutton, R. Porter and A. Wear, *The Western Medical Tradition 800 BC to AD 1800* (Cambridge University Press, Cambridge, 1995); David Cressy, *Birth, Marriage, and Death. Ritual, Religion, and the Life-Cycle in Tudor and Stuart England* (Oxford University Press, Oxford, 1997); Laurence Brockliss and Colin Jones, *The Medical World of Early Modern France* (Clarendon Press, Oxford, 1997); Gianna Pomata, *Contracting a Cure. Patients, Healers, and the Law in Early Modern Bologna* (Johns Hopkins University Press, Baltimore, 1998); Mary Lindemann, *Health and Healing in Eighteenth-Century Germany* (Johns Hopkins University Press, Baltimore, 1996).

community of historians and partly from the desire to broaden the subject. The enterprise of aligning the social history of medicine with the themes of the 'grand narrative' of history has meant that some significant areas of medicine have been ignored, because the historian's spotlight becomes highly selective in choice of material and interpretation.[3] I believe that there were considerable expanses of medical culture that were largely unaffected by major historical changes. For instance, the political and social transformations associated with the Restoration of Charles II have been used to explain late seventeenth-century medicine,[4] but the continuities within medical practice have often been overlooked. Similarly, histories of controversy have tended to ignore the large areas of agreement that existed between warring groups; in the first half of this book controversies appear but not to the exclusion of all else. Certainly, the findings of the new social history of medicine influence this book. But in writing it I have tried not to follow the by now standard approaches and interpretative tracks of early modern historians of medicine; to have done so would inevitably have resulted in a shift in focus away from the content and meaning of medical knowledge and practice. Instead, I have tried to get as close as possible to the medical mind-sets of early modern medicine as represented in vernacular medical books.

In some ways this book is a mapping of medical beliefs and culture written as post-social history. It is not concerned with the origin of beliefs as in some traditional history. Much of early modern medical knowledge could be found in the Middle Ages and in Greek and Roman times, but this does not lessen its reality for people living in the sixteenth and seventeenth centuries. Just like other aspects of pre-modern material and cognitive culture, the culture of medicine had long roots in time and changed slowly, but for individuals it was part of the lived present, the world of events. Such a view, which

[3] For a critique of grand narrative in the history of science see Andrew Pickering, *The Mangle of Practice: Time, Agency and Science* (University of Chicago Press, Chicago, 1995), esp. pp. 179–242; see also Jean-François Lyotard's comment cited at p. 213: 'The grand narrative has lost its credibility' (from *The Postmodern Condition: A Report on Knowledge* (University of Minnesota Press, Minneapolis, 1984), p. 37). Also Pickering, 'Cyborg History and the World War II Regime', *Perspectives on Science*, 3, 1995, 1–48, especially pp. 1–4 for some incisive comments on the master narratives of 'Nature, Reason and Society'. David Harley has informed me that *Social History of Medicine* will be publishing a paper in which he describes what has fallen out of sight in the social history of medicine.

[4] For instance, in the admirable and nuanced study by Harold J. Cook, *The Decline of the Old Medical Regime in Stuart London* (Cornell University Press, Ithaca, 1986).

comes from the French *Annales* school of history, helps to justify my approach in most of the first part of the book, where I look for continuities and find little significant change in medical knowledge and practice from the mid-sixteenth to the mid-seventeenth century. Such an emphasis on continuity allows the focus to remain on how, for instance, diseases or advice on healthy living were envisaged, rather than on searching for the reasons for change, when there was little or no change.

I have decided, as a 'naïve' observer, to ignore the now perhaps faltering interpretative orthodoxy of the history of medicine and science, that of the social constructivists.[5] Social constructivism is not much in evidence in historical writing on the early modern period, but the title of my book might be interpreted as belonging to this school. Such a way of writing history would detract from the work of uncovering how illness was explained and treated, and also, in my view, it is an approach that works well only for particular contexts such as colonial medicine, where power and knowledge are closely intertwined. In relation to this book, a reader can easily work out how some knowledge, for instance, relating to plague – the belief in contagion, the building up of hope for cure – fitted the interests of governments concerned with preserving social order. But much of the medical knowledge of this time was socially constructed only in the weak sense of being produced by human beings, or at most of being a convenient way for a group of practitioners to claim an expertise and hence a monopoly of practice. One also has to ask whether any work on the social construction of medicine has influenced general historians. The answer is likely to be 'no'. This is not surprising since, in a post-modern age, where to interpret is to deconstruct, no system of explanation has explanatory priority over any other. The claims, therefore, of the social sciences to provide normative explanations of knowledge that would replace those of the philosophers are caught within the paradox of post-modernism: infused with the social sciences and yet undermining of their claims and those of all others, including philosophy and history.

The book covers the period between *c.*1550 and *c.*1680. By 1550 the attempt of learned, that is university-educated, physicians to reform English medicine was well under way, as was the printing of vernacular medical books which sought to spread medical knowledge

[5] See, for instance, the work of Steven Shapin, Simon Schaffer and Roger Cooter.

widely amongst lay people and practitioners. Although there were ripples of change coming from Paracelsian medicine from the later sixteenth century, it was not until the Helmontian attempt to revolutionise medical knowledge and especially therapeutics that there was a real challenge to orthodox Galenic medicine and its various popularised versions. The book ends in the 1680s, because by then the future shape of eighteenth-century medicine had begun to emerge from a maelstrom of change that involved Helmontians, empirics, the critiques and innovations of Thomas Sydenham, the modernisation of learned medicine by Thomas Willis and others, and institutional and educational transformations. The new medicine was also shaped by the long-term continuities charted in earlier chapters.

The book begins with an overview of the context of early modern medicine for those not familiar with it. Chapters 2 and 3 focus on remedies and diseases, in my view the most important parts of early modern medicine, reflecting the central concerns of patients and practitioners. To help redress the strange neglect of remedies by modern medical historians, I have placed them before diseases. The two chapters also indicate what underpinned medical practice: giving remedies and 'discoursing' with the patient about disease. Chapter 4, on preventive medicine, examines the advice given on diet, lifestyle and what constituted a healthy environment; this catered for the widespread interest in healthy living among the literate classes, and was usually provided by the learned physicians. Chapter 5, on surgery, discusses the third branch of medicine after pharmacy and diet: it attempts to recreate something of surgical theory and practice. It shows that, in contrast to the physicians, the surgeons acted far more extensively upon the patient's body. A major point of continuity shared with medical views of disease is the surgical concern with putrefaction as one of the causes of disease and death. I have been concerned to show how putrefaction and corruption are pivotal to early modern medicine. The two chapters on plague also illustrate this point, as well as showing how medicine, regimen and surgery were all brought into play to counter the disease.

Change, Anglo-American historians will be glad to know, does come into this history. If there are any heroes of this story, they are the Helmontians, who around the 1660s tried but failed to overthrow the therapeutics of the learned physicians derived from Greek

Galenic medicine. The insights of the Helmontians into the nature of learned medicine were sharp and critical. But, as they themselves admitted, the Galenic physicians had been successful in getting a wide spectrum of society to accept their theories and practices (which sixteenth-century Galenists saw as part of their push to reform medicine). Consequently, Helmontians faced opposition from the public to their new type of medicine. The nature of this medicine and the opposition to it from patients are charted in chapters 8 and 9. Finally, the new developments that shaped medicine as it entered the eighteenth century are set out. They ranged from the eclecticism of the empirics and the innovation of Sydenham to the modernising of learned medicine. It is in these last three chapters, which make up the second part of the book, that I switch historiographical gear, bringing the book closer to the history of controversies and grand narrative. But even in the midst of change continuities remained, whether in the picturing of disease in the body, in the need to evacuate putrefaction and disease, or in the relationship of health to diet, lifestyle and the environment. The earlier chapters, which try to capture the more 'placid' and long-lasting aspects of medical knowledge and practice, provide an important background for understanding and assessing continuity and change in later seventeenth-century medicine. Such continuities have too often been missed. Two large topics, midwifery and madness, have not been discussed except in passing, since there is excellent work on them elsewhere.[6] More generally, magic and witchcraft have not been included as they are not central to the literate vernacular medical tradition.

The sources for this history are largely vernacular texts on remedies, diseases, regimen, etc. that range from those designed to be read by lay people to those mainly for practitioners. However, despite such distinctions, literate medicine represents a unified medical culture largely shaped by elite learned medicine from the Middle Ages and especially from the sixteenth century. The texts include many translations of continental European works. Their popularity indicates that

[6] See especially Adrian Wilson, *The Making of Man-Midwifery: Childbirth in England, 1660–1770* (Harvard University Press, Cambridge, Mass., 1995) and the forthcoming book on midwifery by Doreen Evenden. On madness see especially MacDonald, *Mystical Bedlam*; R. Porter, *Mind Forg'd Manacles: Madness and Psychiatry in England from Restoration to Regency* (Athlone Press, London, 1987; Penguin, Harmondsworth, 1990); Jonathan Andrews et al., *The History of Bethlem* (Routledge, London, 1997).

much of medical knowledge was crosscultural. The vernacular texts are discussed at greater length in chapter 1. What I have done is to read them and try to capture and interpret the medical culture they transmitted to early modern England.

PART I

CHAPTER I

Setting the scene

INTRODUCTION

This chapter gives the background and context to the rest of the book.[1] It sets out some of the basic findings of historical demographers on mortality and morbidity in early modern England (*c.*1550–*c.*1700). It then sketches in the wide range of medical provision patients could use as described by recent work in the social history of medicine, and discusses how medicine co-existed with the other healing main resource, religion. Finally, the texts that communicated medical knowledge and practice are considered. Most were written in English and this helped to create a literate medical culture that both recognised popular–elite distinctions and accepted that educated lay people and practitioners could share in a common medical culture.

LIFE AND DEATH

Our Clocks of Health seldome go true: those of Death more certaine than beleeved.[2]

Medical writers and practitioners in the early modern period lived in a world where disease and death were ever present, or so it seemed. Death was highlighted in the Christian teaching that emphasised the need to be constantly prepared for death. Illness was 'the messenger of death', and the devout declared that 'every day shall be as my dying day'.[3] However, not all age groups were equally at risk of dying.

[1] And it should help those readers not already well acquainted with the recent social history of medicine in early modern England.

[2] Stephen Bradwell, *Helps for Suddain Accidents* (London, 1633), sig. A3^{r}.

[3] Robert Yarrow, *Soveraigne Comforts for a Troubled Conscience* (London, 1634), p. 406; Robert Horne, *Life and Death, Foure Sermons* (London, 1613), cited in A. Wear, 'Puritan Perceptions of Illness in Seventeenth Century England' in R. Porter (ed.), *Patients and Practitioners: Lay*

Death especially dogged the footsteps of the young. Early modern England had higher infant mortality rates than many Third World countries today, although those in continental Europe and Scotland were worse. Of a thousand babies born alive, around a hundred and sixty would be dead by the end of their first year. Life expectancy at birth in the period 1600–49 was 36.4 years; however, if childhood was safely navigated, then a long life was on the cards. Expectation of life for both men and women at age thirty was about another thirty years.[4]

Geography and social status helped determine an individual's chances of life. Towns and cities generally had higher mortality rates than the countryside. For instance, the parish of Hartland in Devon enjoyed the lowest mortality rates so far discovered in early modern England. Its infant mortality was below 100 and life expectancy at birth was more than 55 years; such figures were, as E. A. Wrigley points out, 'attained nationally only about 1920'. Hartland was relatively isolated, bounded on two sides by the sea, and far from major roads, its 1,000–1,500 inhabitants living in widely spaced houses and farms.[5] Cities and towns, on the other hand, had high density populations and housing, and were usually centres for trade and communication routes that also brought in diseases. In urban areas the lack of effective sewage disposal led to more illness than was the case in the less crowded countryside, and clean water supplies were less available in the towns. Morbidity and mortality flourished in such conditions. Small towns suffered worse death rates than their surrounding countryside. The populations of cities such as York, Bristol, Norwich, Newcastle and, most famously, London, were not self-sustaining and only the constant inflow of people from the countryside allowed them to grow.[6] However, some parts of the

Perceptions of Medicine in Pre-Industrial Society (Cambridge University Press, Cambridge, 1985), p. 64, and see pp. 61–70 generally.

[4] R. A. Houston, *The Population History of Britain and Ireland 1500–1750* (Macmillan, London, 1992), pp. 50–1; E. A. Wrigley and R. S. Schofield, *The Population History of England 1541–1871* (Edward Arnold, London, 1981), pp. 250–3; Michael Flinn (ed.), *Scottish Population History from the Seventeenth Century to the 1930s* (Cambridge University Press, Cambridge, 1977).

[5] E. A. Wrigley, 'No Death Without Birth: the Implications of English Mortality in the Early Modern Period' in R. Porter and A. Wear (eds.), *Problems and Methods in the History of Medicine* (Croom Helm, London, 1987), pp. 137–8.

[6] Wrigley, 'No Death Without Birth', pp. 136–7; R. A. Finlay, *Population and Metropolis: the Demography of London, 1580–1650* (Cambridge University Press, Cambridge, 1981), pp. 51–69.

countryside were unhealthy, especially the marshy and estuarine areas of the south-east of England where 'agues' or malaria and water-borne diseases flourished and infant mortality was as high as 250–300 per 1,000.[7]

Social differences showed themselves in the mortality statistics. The poor, who almost by definition lived in the unhealthiest parts of towns, fared worse than the rich. In the well-to-do central London parishes life expectancy was 35 years at birth, whilst in the poor densely populated suburban parishes it was almost a third lower and infant mortality was also higher.[8] Of a thousand live births in the period 1580–1650, 631 children survived to the age of fifteen in the wealthy parish of St Peter Cornhill, but only 508 in deprived Allhallows between 1570 and 1636.[9]

Expectation of life was almost identical for both sexes,[10] although women certainly faced the additional dangers of childbirth. If they experienced six or seven full-term pregnancies they ran a 6 or 7 per cent risk of death in childbirth. Maternal mortality caused up to 20 per cent of all female deaths between the ages of 25 and 34, and 11–14 per cent for women aged between 20 and 24 and 35 and 44, but these were the age groups when women's overall mortality, like men's, was relatively low.[11]

DISEASES

Given four hundred years' difference in the diagnosis and classification of disease, the diseases of early modern England are less easily identified and quantified in modern terms. Although the use of modern disease labels often hinders an understanding of how

[7] Mary Dobson, 'Mortality Gradients and Disease Exchanges: Comparisons from Old England and Colonial America', *Social History of Medicine*, 2, 1989, 265, and *Contours of Death and Disease in Early Modern Europe* (Cambridge University Press, Cambridge, 1997), pp. 176–7, and pp. 81–220 for mortality in general in south-east England.

[8] Houston, *Population History*, p. 50; Finlay, *Population and Metropolis*, pp. 107–8.

[9] Finlay, *Population and Metropolis*, pp. 171, 168, 107.

[10] Houston, *Population History*, pp. 52–3. There has been, in Houston's view, an inconclusive debate as to whether the female infants born to a family that already had a number of children were neglected and suffered a higher mortality than male.

[11] Houston, ibid., p. 56, points out that a village of 1,000–1,500 population, of which a quarter were women aged 15–49, 'would experience only one maternal death on average every third year', and that higher female mortality should be balanced by higher male mortality in the same years due to occupational risks such as coal-mining in north-east England, etc.; also Adrian Wilson, *The Making of Man-Midwifery: Childbirth in England, 1660–1770* (Harvard University Press, Cambridge, Mass., 1995), pp. 18–19.

diseases were perceived in the past (see chapter 3), they have been frequently employed to draw the demographic map of disease and death in early modern England, an enterprise that is self-consciously based on modern methods and categories. Acute infections undoubtedly accounted for many deaths. Gastro-enteric infections such as dysentery, typhoid, salmonella and 'fluxes' or undifferentiated diarrhoeas were prevalent, as were the respiratory infections of whooping-cough, diphtheria, scarlet fever, influenza, smallpox and typhus. Many of the very young were culled by these diseases, while smallpox was more deadly to children over two.

In addition, periods of very high mortality, or short-term mortality crises (defined as an average yearly mortality at least 10 per cent above the expected trend, or at least a 25 per cent rise in the monthly total above the trend, where often it rose above 100 per cent), produced enormous social, economic, cultural and psychological devastation. Between 1550 and 1750 England suffered thirty-seven periods of crisis mortality.[12] Plague, one of God's three arrows along with war and famine, was a major cause. After the initial pandemic of 1347–1351, when a third of Europe's population died, it continued to visit different areas in a series of epidemics. Death rates in the subsequent epidemics were lower but still high. In sixteenth- and seventeenth-century England at least 10 per cent of an affected population would die in a year in a plague outbreak; around a fifth of London's population died in the plagues of 1563, 1603, 1625 and 1665 (mortality was less in 1578, 1593 and 1638), whilst a third of the population of Norwich died in 1579 and even more in Newcastle in 1636 and in Colchester in 1666.[13] However, given that England was still a rural country and that plague was largely an urban disease, the overall national figures were lower.[14]

Another of God's arrows, famine, was less prevalent than in continental Europe where famine years were frequent up to the mid-eighteenth century. In England, crises of subsistence affected parts of the north and isolated areas of the south in 1596–8 and 1623–4, but after the mid-seventeenth century famine had largely left England. Agricultural innovations, for instance, no longer relying on one grain crop, the spring sowing of oats and barley to supplement

[12] Wrigley and Schofield, *Population History*, p. 333.
[13] Paul Slack, *The Impact of Plague in Tudor and Stuart England* (Routledge & Kegan Paul, London, 1985), pp. 14–16, 145–51; Finlay, *Population and Metropolis*, pp. 17, 112.
[14] Slack, *Impact*, p. 16; Houston, *Population History*, p. 55.

winter sowing, and the establishment of a unitary market for grain, helped eradicate large-scale starvation.[15] However, regular as opposed to extraordinary levels of starvation continued to be suffered by small numbers of the poor even in times of plenty.[16] Nevertheless, the poor suffered disproportionately from infectious diseases. Plague came to be associated with the poor and their living conditions (see chapters 6 and 7).[17] Typhus, which entered Europe at the end of the fifteenth century, was a disease of prisons ('gaol fever'), hospitals and armies, and also spread through the crowded slums of the poor. However, except for the impressions of contemporary observers, there is no precise data differentiating levels of morbidity between the rich and poor.

Apart from plague, it was the 'pox', which probably included modern syphilis, that had the greatest cultural and psychological impact, although its impact on mortality levels was small. Plague had been the great 'new' disease of the Middle Ages; in the Renaissance it was the pox (how it was understood and treated is discussed in chapter 5). Other novel diseases such as the 'English sweat,' which appeared in 1485, left after 1551, and may have been influenza, and a variety of strange fevers added to the uncertainty of a world already overfilled with familiar diseases.[18]

It was only in the period 1850–1950, when England and then the rest of Western Europe went through 'the demographic transition' from high to low infant and childhood mortality, that the major

[15] J. Walter, 'The Social Economy Dearth in Early Modern England' in J. Walter and R. Schofield (eds.), *Famine, Disease and the Social Order in Early Modern Society* (Cambridge University Press, Cambridge, 1989), pp. 75–128; Massimo Livi-Bacci, *Population and Nutrition* (Cambridge University Press, Cambridge, 1991), pp. 50–62.

[16] John Graunt, *Natural and Political Observations . . . Upon the Bills of Mortality*, 5th edn (London, 1676), p. 25: 'starved' was one of Graunt's 'accidents of life'; from the bills of mortality, which were compiled from the weekly returns by London's parish clerks of numbers of deaths and their causes, Graunt calculated that in fourteen years 51 people had been certified as dead in London due to starvation.

[17] Slack, *Impact*, p. 153, notes that by the seventeenth century the topography of plague was clearly biased towards the poor areas of London.

[18] Lloyd G. Stevenson, '"New Diseases" in the Seventeenth Century', *Bulletin of the History of Medicine* 39, 1965, 1–21; cf. also Henry Whitmore, *Febris Anomala Or, The New Disease that Now Rageth Throughout England* (London, 1659). There has been a recent debate on what the English sweat really was: A. Dyer, 'The English Sweating Sickness of 1551: an Epidemic Anatomised', *Medical History*, 41, 1997, 362–84; M. Taviner, G. Thwaites and V. Gant, 'The English Sweating Sickness, 1485–1551: a Viral Pulmonary Disease?', *Medical History*, 42, 1998, 96–8. J. R. Carlson and P. W. Hammond, 'The English Sweating Sickness (1485–*c.*1551): a New Perspective on Disease Aetiology', *Journal of the History of Medicine and Allied Sciences*, 54, January 1999, 23–54.

causes of death shifted from acute infectious diseases to the chronic degenerative diseases of middle and old age, and the expectation grew that only the elderly faced a real threat of death. However, in early modern England chronic illness was also present, though unquantifiable. Cancers, heart disease, arthritis, gout and paralysis could slowly and painfully handicap life, as could psychological conditions such as melancholy, and even conditions such as thrush, which today seem minor, could cause constant trouble for years.[19]

A question that springs to mind from the perspective of the twenty-first century is whether early modern 'medicine' addressed itself to the three great health problems that are apparent from the findings of historical demography: high infant and child mortality, the allied threat of infectious diseases and the higher mortality of the poor.[20] With the exception of plague, and to a lesser extent the pox, English governments did not initiate any action against diseases.

[19] See, for instance, Samuel Jeake of Rye who complained of oral thrush that lasted for many years: 'About this time I began to be troubled with a white pertinacious Thrush in the upper Jaw within side in the Mouth, which gradually slowly encreased, & all means I used proved ineffectuall. I could never be cured of it; but it was without pain, & not very much till 4 or 5 years after': Michael Hunter and Annabel Gregory (eds.), *An Astrological Diary of the Seventeenth Century: Samuel Jeake of Rye 1652–1699* (Clarendon Press, Oxford, 1988), p. 194. On madness see: Michael MacDonald, *Mystical Bedlam, Madness, Anxiety and Healing in Seventeenth Century England* (Cambridge University Press, Cambridge, 1981); R. Porter, *Mind Forg'd Manacles: Madness and Psychiatry in England from Restoration to Regency* (Athlone, London, 1987; Penguin, Harmondsworth, 1990).

[20] To argue that 'medicine' should have addressed itself to the demographic facts of death is also to misunderstand how those facts were changed. The demographic transition phase was largely due to a combination of public health measures rather than better medical treatments: better sanitation, clean water supplies, improved diet and working conditions. It was pushed through by political rather than medical action, though doctors were involved and there were some medical developments such as vaccination and the later discovery of sulpha drugs and antibiotics that were important for reducing smallpox deaths and maternal mortality. Moreover, it was not until the twentieth century that British governments envisaged the provision of universal health care through insurance schemes or from general taxation, which meant that for the first time the health of the different parts of the population came under government scrutiny. I. Loudon, 'On Maternal and Infant Mortality, 1900–1960', *Social History of Medicine*, 4, 1991, 29–73; Loudon, 'Deaths in Childbed from the Eighteenth Century to 1935', *Medical History*, 30, 1986, 1–41; Loudon, 'The Transformation of Maternal Mortality', *British Medical Journal*, 305, 1992, 1557–60; Loudon, *Death in Childbirth: an International Study of Maternal Care and Maternal Mortality, 1800–1950* (Clarendon Press, Oxford, 1992); A. Hardy, *The Epidemic Streets: Infectious Disease and the Rise of Preventive Medicine, 1856–1900* (Clarendon Press, Oxford, 1993); A. Hardy, 'Smallpox in London: Factors in the Decline of the Disease in the Nineteenth Century', *Medical History*, 27, 1983, 111–38; S. R. S. Szreter, 'The Importance of Social Intervention in Britain's Mortality Decline *c.*1850–1914: a Re-interpretation of the Role of Public Health', *Social History of Medicine*, 1, 1988, 1–37 and 'Mortality in England in the Eighteenth and Nineteenth Centuries: a Reply to Sumit Guha', *Social History of Medicine*, 7, 1994, 269–82.

Further, they seem to have been blind to the young as a high-risk group, which is understandable as quantified mortality statistics did not exist, and in any case England appeared healthier than neighbouring France.[21] They could have made existing medical expertise and treatment more widely available, but only during the English revolution was such action envisaged and even then not at government level. Moreover, what action could they have taken? Pouring funds into medical research on infectious diseases? That would have been difficult in 1550 when, it was claimed, the best medical knowledge was to be found in the works of Greek and Roman medical writers, with 'research' lying either in the retrieval of that knowledge in its purest form or in its refinement. In any case, it was not until the later seventeenth century that the state, especially in France, supported medical research. The role of the state was limited to action against the contagious diseases of the plague and the pox where it initiated isolation and public health measures (plague being seen as both a contagious and an environmental disease). 'Research' by individuals searching for curative remedies did take place. However, there was a widespread realisation that in the absence of medical trials (see chapter 8) it was well nigh impossible to know for sure if a remedy was effective:

It is a great Question what does the cure, the Vulgar [the public] will tell you the last thing they took did the cure, as the last thing they did caused the disease; Some Physicians will ascribe it to the rarity and dearnesse, others to the variety and composition [of the remedies], others to the fitnesse and order [of the treatment] etc. others think it is not Physick or Physicians, but Nature being disburthened returns to her functions by degrees . . . And some adde, that it is not Nature but the God of Nature

[21] On attitudes to children see: L. Stone, *The Family, Sex and Marriage in England 1500–1800* (Weidenfeld & Nicolson, London, *c.*1977), especially pp. 64–81 on infant mortality; Linda Pollock, *Forgotten Children: Parent–Child Relations from 1500 to 1900* (Cambridge University Press, Cambridge, 1983); Philippe Ariès, *Centuries of Childhood* (Penguin, Harmondsworth, 1979). Medical treatises on infant health include: James Guillemeau, *Childbirth, or the happie deliverie of women. Wherein is set downe the gouernment of women . . . together with the diseases which happen to women. To which is added, a treatise of the diseases of infants, and young children: with the cure of them. Written in French by Iames Guillemeau* (London, 1612); Robert Pemell, *De morbis puerorum, or, a treatise of the diseases of children; with their causes, signs, prognosticks, and cures. For the benefit of such as do not understand Latine tongue, and very useful for all such as are house-keepers, and have children* . . . (London, 1653); Gualtero Harris, *De morbis acutis infantum* (London, 1689); Walter Harris, *A treatise of the acute diseases of infants. To which are added, medical observations on several grievous diseases [and 'Of the venereal disease']. Written originally in Latin by the late learned Walter Harris . . . Translated into English by John Martyn* (London, 1742).

which heals us, and as the Proverb is, God heals, and the Physician hath the thanks.[22]

The diseases that affected the young and the poor were not the subject of any concerted campaign whether by medical practitioners, the government or the public. Medicine, as we shall see, was largely practised by individuals who were paid by individual patients, and their horizons were necessarily foreshortened. Medical institutions, the usual foci of concerted action, did exist but were few in number and membership. Moreover, though there were specialist practitioners for the pox, cutting for kidney and bladder stones, for eye problems and for setting bones, most practitioners were generalists rather than specialists. This is one reason why the question of medical research on the demographic fault lines of early modern England is misconceived though illuminating.

THE SICK POOR

A distinction has to be made between welfare and medical treatment. As part of the parish welfare support the poor sometimes had their treatment paid for them; and the English governing elite did concern itself with the welfare of vulnerable groups. For the young it set up charitable institutions such as Christ's Hospital in London, encouraged parishes to take care of foundlings through to apprenticeship, and took steps to protect apprentices from abusive masters.[23] The poor, especially, were the focus of attention by the English government and by some medical practitioners and writers. Christianity had originally given the poor a special status as chosen of God, the objects for charitable good works. In the early sixteenth century, they came to be differentiated as either undeserving and dangerous or the deserving, respectable, shame-faced poor: 'A faulte maketh necessitie, in this case of begging, in them, whyche might laboure and serve, and wil not for idlenes: and therfore not to be pitied, but rather to be punished. Necessitie maketh a fault in them,

[22] Henry Edmundson, *Comes Facundus in Via, The Fellow Traveller* (London, 1658), pp. 111–12; see A. Wear, 'Interfaces: Perceptions of Health and Illness in Early Modern England' in R. Porter and A. Wear (eds.), *Problems and Methods in the History of Medicine* (Croom Helm, London, 1987), pp. 240–3, 248–52 on uncertainty in medicine and on the early modern awareness of demographic facts.

[23] Carol K. Manzione, *Christ's Hospital of London, 1552–1598: 'A Passing Deed of Pity'* (Associated University Presses, London, 1995).

whiche wold labor and serve, but cannot for age, impotency, or sickenes, and therfore to be pitied and relieved.'[24]

Together with a new less positive view of the poor came new ways of funding poor relief. Across Europe, starting early in the sixteenth century in the Low Countries, towns and cities amalgamated charitable funds into single centralised 'common chests' for the poor. Charity became subject to secular regulation; face-to-face charity between individuals continued, though on a decreasing scale. In England, a series of Poor Laws, culminating in that of 1601, uniquely financed poor relief on a national level through rates collected and distributed locally by the parish. Treatment of the sick poor was sometimes contracted out. In Norwich a variety of men and women practitioners and former lazar house keepers (leprosy having declined) were contracted to cure the poor, the aim being to get them back to work. London parishes often paid the poor to look after the sick poor as well as giving them money to pay for treatment and medicines from practitioners in the commercial medical marketplace.[25] However, only when one was completely penniless was any aid given.[26] Moreover, there had to be a perception that a person could not work, usually because of sickness or the infirmities resulting from old age, for relief to be given. Old age did not by itself make a person eligible for poor relief, though many recipients were old. Men and women were expected to work into very old age if they could. John Ward, the vicar of Stratford-upon-Avon between 1662 and 1681, who practised medicine and took a lively interest in the development of the 'new science' and in medicine generally, noted in

[24] John Caius, 'A Boke or Counseill Against the Disease Commonly Called the Sweate or Sweating Sicknesse' (1552) in *The Works of John Caius MD*, ed. John Venn (Cambridge University Press, Cambridge, 1912), p. 28. See Paul Slack, *Poverty and Policy in Tudor and Stuart England* (Longman, London, 1988); Robert Jütte, *Poverty and Deviance in Early Modern Europe* (Cambridge University Press, Cambridge, 1994). For a seminal essay on the topic see Natalie Zemon Davis, 'Poor Relief, Humanism, and Heresy' in Natalie Zemon Davis (ed.), *Society and Culture in Early Modern France* (Stanford University Press, Stanford, California, 1975), pp. 17–64. Barbara Harvey traces a negative attitude to sections of the poor back to the second half of the fourteenth century in her *Living and Dying in England 1100–1540: the Monastic Experience* (Clarendon Press, Oxford, 1993), pp. 30–3. I am grateful to Professor Nancy Siraisi for this reference.

[25] Margaret Pelling, 'Healing the Sick Poor: Social Policy and Disability in Norwich, 1550–1640', *Medical History*, 29, 1985, 115–37; Andrew Wear, 'Caring for the Sick Poor in St Bartholomew Exchange: 1580–1676' in W. F. Bynum and R. Porter (eds.), *Living and Dying in London*, *Medical History*, Supplement 11, 1991, 41–60.

[26] The sick poor often pawned their clothes to pay for treatment, and any money they had could be appropriated towards the cost of treatment before a parish released its money; see Wear, 'Caring for the Sick Poor', pp. 48, 50–51.

his diary: 'George Green, of Woodstock, 90 years of age, that will mowe and doe a good days work still', and 'Cripps, of Woodstock, 90 years of age, that works all the yeer as other men doe, hath as much wages; he is wondrous vivacious, and the last two very hard laborers all their time'.[27]

The poor often had to make do with the minimum of medical care. Thomas Fuller, the antiquarian, observed how in Cheshire, 'if any here be sick "they make him a posset [a hot drink of milk, mixed with beer or wine and sugar and spices] and tye a kerchieff on his head; and if that will not mend him, then God be merciful to him" '. But, he added, 'be this understood of the common people, the Gentry having the help (no doubt) of the learned in that profession [medicine]'. The Kent physician Robert Pemell wrote that the poor had to be their own doctors, and he and other practitioners published remedies that the poor could afford.[28] It was up to the individual practitioner whether to charge the poor less, as did 'Dr. Chamberlayne, the man midwife . . . his fee is five pound, yett I heard, if he come to poor people, hee will take lesse'.[29] However, ethical injunctions stressed the need for practitioners to be charitable: young surgeons were urged 'not [to be] to covetous for money, but a good demander, being good unto the poore, let the rich pay therefore'.[30] Nevertheless, organised charitable medical treatment

[27] John Ward, *Diary of the Rev. John Ward, A. M., Vicar of Stratford-Upon-Avon . . . 1648 to 1679*, ed. Charles Severn (London, 1839), p. 136. On Ward see Robert G. Frank, 'The John Ward Diaries: Mirror of Seventeenth Century Science and Medicine', *Journal of the History of Medicine* 29, 1974, 147–79. For a general discussion of old age and work see Margaret Pelling, 'Old Age, Poverty and Disability in Early Modern Norwich: Work, Remarriage and Other Expedients' in her book *The Common Lot. Sickness, Medical Occupations and the Urban Poor in Early Modern England* (Longman, London, 1998); at pp. 140–3, she notes that elderly women when no longer looking after children often went back to work.

[28] Thomas Fuller, *The History of the Worthies of England*, 1st edn 1662, 2 vols, (London, 1811), vol. I,, p. 190, quoting William Smith, *Vale Royal*, p. 16. Robert Pemell, *ΠΤΩΧΟΦΑΡΜΑΚΟΝ* . . . Or Help for the Poor (London, 1650), sig. A3^{v}. Richard Hawes, *The Poor-Mans Plaster Box* (London, 1634), p. 10, took the material conditions of the poor into account: 'If the man faln or bruised be so poore that he hath no bed to sweat in, then annoynt him with this following [melted butter, parsley, rue or hearbgrace fried in the butter and strained], and set him for to sweat in horse dung up to the chin, and cover his head with hay . . . but it be neither cleanly, nor chargeable [expensive]'.

[29] Ward, *Diary*, p. 107. Not all practitioners were so charitable. In 1659, for instance, the churchwarden of St Bartholomew's Exchange in London noted that in the case of Widow Hall, one of the pensioners of the parish who needed treatment for a fall, a broken arm and injured head, the overseers of the poor 'were also desired to mediate with Mr. Thicknes in her behalf who required £6 for her cure . . . but he would not abate any thing'; quoted in Wear, 'The Sick Poor', p. 51.

[30] William Clowes, *A Briefe and Necessarie Treatise, Touching the Cure of the Disease Called Morbus Gallicus* (London, 1585), fol. 42^{r}.

for the sick poor was not provided until the end of the seventeenth century when the London College of Physicians set up a charitable dispensary. Despite the Christian ethic of the charitable care of the sick, the learned or university-educated physicians especially were viewed as expensive and uncharitable. Remedies for the poor were not only composed of cheaper ingredients than those for the rich (see chapter 2), but the poor were excluded from expensive medical expertise, as one puritan minister and physician advised in the time of plague: 'Let the rich seeke for the godly, wise and learned Physician . . . And let the poorer sort with good advise and counsell (if they can have any) use Master Phares medicines in his short but learned Treatise of the Pestilence, which hee wrote of purpose for the benefit and comfort of the Poor'.[31] Because of the ethic of charity the poor were provided with some medical help that they would not otherwise have enjoyed, but on the whole they were not the object of concerted medical attention, with the exception of Paracelsian and Helmontian physicians (on this, see chapters 8 and 9).

MEDICAL PRACTITIONERS

It would be a mistake to think of medical provision only in terms of the commercial medical marketplace and its expensive end at that. Many would have agreed that 'All the Nation are already Physitians, If you ayl any thing, every one you meet, whether man or woman will prescribe a medicine for it.'[32] Social historians of medicine in the past fifteen years have confirmed that medical expertise was widespread across society.[33] Lay medical practice was centred on the family. Patients often treated themselves, and the women members

[31] Henry Holland, *An Admonition Concerning the Use of Physick* (London, 1603), p. 53. The charitable care of the sick was taught by Christianity as one of the six (later seven) corporal works of mercy based on Matthew 25.35–6: 'For I was an hungred, and ye gave me meat [food]: I was thirsty, and ye gave me drink: I was a stranger and ye took me in: Naked, and ye clothed me: I was sick and ye visited me: I was in prison, and ye came unto me.'

[32] Nicholas Culpeper, *A Physical Directory Or a Translation of the London Dispensary Made by the College of Physicians* (London, 1649), sig. A2^{v}.

[33] See, for instance, the essays in Roy Porter (ed.), *Patients and Practitioners* (Cambridge University Press, Cambridge 1985); Roy Porter and Dorothy Porter, *In Sickness and in Health: the British Experience 1650–1850* (Fourth Estate, London 1988), and *Patient's Progress: Sickness, Health and Medical Care in England 1650–1850* (Polity Press, London 1989); Margaret Pelling, *The Common Lot: Sickness, Medical Occupations and the Urban Poor in Early Modern England* (Longman, London, 1998), Mary Fissell, *Patients, Power and the Poor in Eighteenth Century Bristol* (Cambridge University Press, Cambridge, 1991).

of the family especially were the sources of medical knowledge and treatment. Relatives, neighbours and friends also acted as medical advisers. Charitable gentlewomen, clergymen and their wives treated the poor and provided an informal medical service, which some of the learned physicians saw as a threat and which medical reformers in the 1640s took as the prototype for utopian schemes of nation-wide medical provision organised around ministers.[34]

Practitioners who offered cures for money ranged from village wise women or white witches, who were 'in every village, which if they be sought unto, will help almost all infirmities of body and mind', to the expensive physicians at the top end of the medical market.[35] In villages and towns, midwives, usually women who had children and had trained with another midwife, provided medical expertise during births. Only in the last third of the seventeenth century did male midwives or surgeons begin to manage first difficult and then normal deliveries; previously, they had been called in only in desperate situations to extract the dead foetus, though the midwife might do that in any case.[36]

Empirics, mountebanks, herbalists, astrologers and uroscopists offered their services either as itinerants or from fixed locations. They advertised themselves as cheaper than the physicians.[37] In the

[34] Charles Webster, *The Great Instauration: Science, Medicine, and Reform, 1626–1660* (Duckworth, London, 1975), pp. 246–323.

[35] Robert Burton, *The Anatomy of Melancholy*, 1st edn (1621), ed. Floyd Dell and P. Jourdan-Smith (Tudor, New York, 1948), p. 382. Alan Macfarlane, *Witchcraft in Tudor and Stuart England* (Routledge & Kegan Paul, London, 1970), p. 120 confirms Burton, stating that in the county of Essex no village was more than ten miles from the services of a white witch.

[36] Doreen Evenden, 'Seventeenth Century London Midwives: Their Training, Licensing and Social Profile' (Ph.D. thesis, McMaster University, 1991); Hilary Marland (ed.), *The Art of Midwifery: Early Modern Midwives in Europe* (Routledge, London, 1993). For the later seventeenth century see Wilson, *The Making of Man-Midwifery*.

[37] It is difficult to provide an accurate assessment of the fees and costs of medical treatment. A physician's visit to a patient usually cost between ten shillings and a pound. Some physicians made fortunes, others died in penury: Harold J. Cook, *The Decline of the Old Medical Regime in Stuart London* (Cornell University Press, Ithaca, 1986), pp. 58–9. Empirics might charge two shillings for a bottle of medicine, but as unlicensed practitioners they also contracted with patients to cure them. For instance in 1607 Elizabeth Googe complained that 'Moore of Knightsbridge had accepted twenty shillings of her to restore her to health but after forty days of an ordinary diet and frequent purging, she felt no relief'. In the same year 'Doughton, a surgeon, was accused by Mr. Flud, an attorney, because he had made an agreement with him to cure his wife for the sum of twenty pounds . . . but he had done nothing to earn the reward . . . for after a month or two she relapsed into that madness from which she formerly suffered'. In 1640 James Trikley was accused of giving 'Mrs Smith a powder against the stone in the bladder for one whole month . . . he took 15 s[hillings] as a fee and was to receive 3 l [pounds] afterwards'. Clearly, charges for a cure varied enormously; often the money was paid before the cure and on its completion. The method

eyes of the university 'learned' physicians the only other legitimate practitioners apart from themselves were the surgeons and the apothecaries. The physicians viewed them as subordinate and believed that they should be forbidden to practise internal medicine, which the physicians claimed as their own. In reality, not only did lay people, empirics and others constitute important medical resources despite vitriolic attacks on them by physicians and surgeons, but the occupational distinctions set up by the physicians were often ignored. Surgeon-physicians and apothecary-physicians, such as the Exeter apothecary William Dove, who in 1580 was licensed to practise medicine and surgery, were common in the provinces well before the set-piece debate in London in the later seventeenth century as to whether apothecaries could practise medicine (see chapter 9). Moreover, the distinction between barbers and surgeons was frequently broken in London and was non-existent elsewhere in the country.[38]

Numbers of practitioners are difficult to estimate. London attracted them, as the city's large and expanding population (70,000 in 1550, 200,000 in 1600, 575,000 in 1700) provided a ready supply of buyers for the remedies of empirics, and its wealthy citizens could afford the fees of the physicians who 'usually flock up to London (for there is the money)'.[39] The increasingly central role of London in the national economy also meant that patients from the provinces came to the capital to consult physicians and surgeons. Pelling and Webster calculated that in 1600 London, with a population of 200,000, was served by 50 members affiliated to the College of Physicians, 100 surgeons and 100 apothecaries, and a further 250

of payment indicated that a measure of success was expected. However, few charged 'a featherbed cover' which 'a woman called Pople' did in 1599 for a cure. *Annals of the College of Physicians* in the typescript transcription and translation by the Royal College of Physicians (abbreviated as *Annals*), 2, fol. 193a; 2, fol. 199b; 3, fol. 207a; 2, fol. 140a.

[38] Fundamental are: R. S. Roberts, 'The Personnel and Practice of Medicine in Tudor and Stuart England Part I. The Provinces', *Medical History*, 6, 1962, 363–82, esp. 369, and 'The Personnel and Practice of Medicine in Tudor and Stuart England Part II. London', *Medical History*, 8, 1964, 217–34, which discusses the attempts by London surgeons and apothecaries to practise medicine. See also: Margaret Pelling and Charles Webster, 'Medical Practitioners' in Charles Webster (ed.), *Health, Medicine and Mortality in the Sixteenth Century* (Cambridge University Press, Cambridge, 1979), pp. 165–235; Margaret Pelling, 'Medical Practice in Early Modern England: Trade or Profession?' in Wilfred Prest (ed.), *The Professions in Early Modern England* (Croom Helm, London, 1987), pp. 90–128.

[39] Finlay, *Population and Metropolis*, p. 51; Anon., *Lex Talionis Sive Vindiciae Pharmacoporum: Or a Short Reply to Dr. Merrett's Book; and Others, Written against the Apothecaries* . . . (London, 1670), sig. D4^{r}.

mainly unlicensed practitioners (of whom 60 or slightly fewer were women), not including nurses and midwives. This gives a ratio of one practitioner for every 400 of London's inhabitants, though not every practitioner made a living solely from medicine. In Norwich, which in 1575 had a population of 17,000 at the most, they found a minimum of 73 practitioners, of whom 37 were surgeons or barber-surgeons, many of whom also practised physic or medicine, plus 12 apothecaries, 10 women practitioners, 6 practitioners of physic, 5 university-educated physicians and 3 undetermined, giving a ratio of one practitioner to every 250 or so of the population. Small towns such as Ipswich and King's Lynn had 24 and 15 practitioners respectively in the second half of the sixteenth century.[40] In urban areas at least, England was well provided with medical practitioners. In the countryside, wise women, lay people and the resources of the local town could be drawn upon, whilst a surprising number of licensed medical practitioners and men with medical degrees lived in country areas, though whether they all practised is less clear.[41]

The place where most people were ill was the home. After the Reformation many hospitals were abolished, though a few like St Bartholomew's in London survived or were refounded;[42] but even in the Middle Ages, when hospitals were thick on the ground in England, they did not dominate the medical world as they did in the twentieth century. Hospitals had looked after abandoned children, the poor and vagrants as well as the sick; it was not until the nineteenth century that treatment of the sick became the sole duty of the hospital, and only in the twentieth century did they become the power houses of clinical research and essential to medical careers.

In addition to the patient's house, there were also available small-scale domiciliary facilities for the ill. Sometimes this was an inn near to a practitioner's house. Nursing homes or small informal hospitals were also used for treatment and convalescence. For instance, when Thomas Brockbank caught smallpox in 1691 while a student at Oxford, he was cared for in a nurse's home: 'I sent for my apothecary Hopkins and he told me the smallpox were appearing on

[40] Pelling and Webster, 'Medical Practitioners', pp. 182–8, 225–7; also R. S. Roberts, 'London Apothecaries and Medical Practice in Tudor and Stuart England' (Ph.D. thesis, University of London, 1964).

[41] John H. Raach, *A Directory of English Country Physicians 1603–1643* (Dawsons, London, 1962); see the criticism of Roberts, 'Personnel and Practice . . . Part I', 364–5.

[42] Nicholas Orme and Margaret Webster, *The English Hospital 1070–1570* (Yale University Press, New Haven, 1995), pp. 147–66.

my face. I desir'd him to get a nurse for me which he did, and he accompanied me to her house . . . I grew very ill.' As he recovered, he 'was removed from my old quarters (widow Tipler's in Coach and Horses lane) to Henry Clinches in St. Clements for airing [a change of air was considered beneficial in recovering from illness] where I stayed 1 month at 12/- [shillings] the week. Here I purged and was cleans'd and lay on great expenses.'[43] As well as students far from home care, there were groups like soldiers, sailors, travellers, migrants and those seeking specialised or expert medical care in the metropolis who could not be looked after at home. Nursing homes, embryonic hospitals, catered for their needs. One such was the home of Ellen Wright in the London parish of St Botolph without Aldgate. From at least 1588 to 1599 she took in a variety of sick people and pregnant women, whose presence, either because they were delivered or died there, was recorded by the parish.[44] Surgeons also took patients into their houses or lodged them nearby if they were far from home and needed prolonged treatment (see chapter 5).

The fact that the most serious of illnesses were usually treated at home and the small-scale and specialised nature of semi-institutional care for the sick confirm the individualistic, one-to-one nature of early modern English medicine, centred on transactions between single patients or their families and single practitioners. In such a setting it made sense for medical knowledge to be accessible to lay people as well as practitioners, whereas today institutions like hospitals, the state or professional organisations claim to assess medical expertise and practical skill on behalf of patients.

There were no nation-wide medical institutions. The London College of Physicians, founded in 1518 along the model of the Italian city colleges of physicians, and the London guilds of barbers and surgeons, which were formally united in 1540, were limited to the metropolis. Like other trades, the provincial barber-surgeons,

[43] Thomas Brockbank, *The Diary and Letter Book of the Rev. Thomas Brockbank 1671–1709*, ed. R. Trappes Lomax (Chetham Society, Manchester, 1930), pp. 36–7, 39. On small hospitals or homes for the mad ('mad-houses') see A. Fessler, 'The Management of Lunacy in Seventeenth-Century England: an Investigation of Quarter Sessions Records', *Proceedings of the Royal Society of Medicine*, Section of the History of Medicine, 49, 1956, 901–7; William Parry-Jones, *The Trade in Lunacy. A Study of Private Madhouses in England in the Eighteenth and Nineteenth Centuries* (Routledge & Kegan Paul, London, 1972). A number of Oxford apothecaries seem to have taken the ill into their homes; see T. D. Whittet, 'The Apothecary in Provincial Gilds', *Medical History*, 8, 1964, 245–73, at 258.

[44] For details, see Wear, 'The Sick Poor', 57–8.

who might include physicians, had their own guilds, as in Norwich and York.[45] London apothecaries were members of the Company of Grocers until 1617 when the Society of Apothecaries was established. In the provinces apothecaries either had their own guilds or were part of a composite guild.[46] The training of apothecaries and barber-surgeons was by apprenticeship. Physicians, if they had gone to university in England, would have had to study medicine based on classical sources for seven years after taking their BA and MA degrees. However, after taking an arts degree in England they could go abroad to Italian, French or Dutch universities and acquire an MD degree in less than a year, sometimes in weeks or months on the completion of a brief thesis. Practical medical knowledge was often gained by working with a more experienced physician. Practitioners who had not gone to university or who were not licensed (see below) also often acquired their knowledge by a process of informal apprenticeship. In the latter category, for instance, was Francis Roe alias Vintner. When accused in 1639 of undertaking to cure a woman suffering from 'tympany' (a kind of dropsy or accumulation of water or air in the abdomen), he told the College of Physicians that he had been a student at Cambridge and that 'hee had been instructed in physicke from a boy by his father meaning Mr. Vintner the Emperick'.[47]

Licensing of medical practitioners existed, but was not universal.

[45] Pelling and Webster, 'Medical Practitioners'; Margaret Pelling, 'Occupational Diversity: Barbersurgeons and the Trades of Norwich, 1550–1640', *Bulletin of the History of Medicine*, 56, 1982, 484–511; Margaret Barnet, 'The Barber-Surgeons of York', *Medical History*, 12, 1968, 19–30.

[46] Whittet, 'The Apothecary in Provincial Gilds', 245–73: Juanita G. L. Burnby, *A Study of the English Apothecary from 1660–1756*, *Medical History*, Supplement 3, 1983, 12–13, 15–16, 59–60.

[47] *Annals*, 3, fol. 203b. On unlicensed practitioners and education see Margaret Pelling, 'Knowledge Common and Acquired: the Education of Unlicensed Medical Practitioners in Early Modern London' in V. Nutton and R. Porter (eds.), *The History of Medical Education in Britain* (Rodopi, Amsterdam, 1995), pp. 250–79. On medical education: Cook, *Decline*, pp. 49–52; A. H. T. Robb-Smith, 'Medical Education in Cambridge Before 1600' in A. Rook (ed.), *Cambridge and its Contribution to Medicine* (Wellcome Institute for the History of Medicine, London, 1971), pp. 1–25, and 'Medical Education at Oxford and Cambridge Prior to 1850' in F. N. L. Poynter (ed.), *The Evolution of Medical Education in Britain* (Pitman, London, 1966), pp. 19–52; Robert G. Frank, Jr, 'Science, Medicine and the Universities of Early Modern England: Background and Sources', *History of Science*, 2, 1973, 194–216, 239–69; Gillian Lewis, 'The Faculty of Medicine' in James McConica (ed.), *The Collegiate University*, vol. III of *The History of the University of Oxford* (gen. ed. T. H. Aston) (Clarendon Press, Oxford, 1986), pp. 213–57; Peter Murray Jones, 'Reading Medicine in Tudor Cambridge' in *The History of Medical Education in Britain*, pp. 153–83; also the sections on European medical education by Olaf Pedersen and Laurence Brockliss, in H. De Ridder-Symoens (ed.), *A History of the University in Europe* (Cambridge University Press, Cambridge, 1996), vol. II, pp. 452–5, 609–20.

The London College of Physicians had a membership of fellows, candidates and licentiates who were admitted by examination, whilst the barber-surgeons and apothecaries granted the freedom of their guilds after apprenticeship and examination. From 1511, bishops could license physicians, surgeons and midwives, and although an Act of 1523 gave the College of Physicians the duty of examining all physicians throughout England, the College was unable to enforce the right except in London. Bishops' licences were usually granted on the strength of testimonials from former patients and worthies in the community. Given the lack of a uniform system of licensing, the geographical limits of the licensing bodies, as well as the constant legal challenges which resulted in the authority especially of the College of Physicians to regulate and prosecute unlicensed practitioners draining away in the seventeenth century, it is not surprising that not only were there many practitioners who were unlicensed, but that there was no rigid uniformity in medical knowledge and practice.[48] This also reflects the nature of English law, which had few national enforcement agencies. Although judges from London travelled on assize circuits through the country to dispense national norms of justice, the apprehension of criminals was left to the victims of crime and to local lay officials such as the constables and justices of the peace. Such local and devolved powers are also characteristic of medical regulation. Moreover, English common law, with its piecemeal approach based on precedent, and its hostility to the codifying tendency of the continental Roman law tradition to legislate systematically for all possibilities, was not the instrument to create a uniform legal framework for medical practice. The parts of continental Europe, especially Spain and southern Italy, that regulated a variety of medical practitioners through the tribunal of the Protomedicato, had more uniform and comprehensive systems of medical regulation, even if they were not universally applied.[49]

[48] For the legal basis of the College of Physicians' powers, see G. Clark, *A History of the Royal College of Physicians* (2 vols., Clarendon Press, Oxford, 1964 and 1966). Cook, *Decline*; Cook, ' "Against Common Right and Reason": The College of Physicians versus Dr Thomas Bonham', *American Journal of Legal History*, 29, 1985, 301–22; Cook, 'The Rose Case Reconsidered: Physicians, Apothecaries, and the Law in Augustan England', *Journal of the History of Medicine*, 45, 1990, 527–55. The court and the nobility also often intervened on behalf of empirics and further weakened the College's ability to police medical practice, on which see Clark, *College of Physicians*, vol. I.

[49] J. T. Lanning, *The Royal Protomedicato. The Regulation of the Medical Professions in the Spanish Empire* (Duke University Press, Durham, 1985); D. Gentilcore, *Healers and Healing in Early Modern Italy* (Manchester University Press, Manchester, 1998); Gentilcore, ' "All that

The overall impression of English medicine in the sixteenth and seventeenth centuries is of a large number of different kinds of practitioners. Those who made a living from medicine were often in fierce competition with each other. The College physicians and barber-surgeons had institutional rules that limited competition between members: they were enjoined not to poach patients from each other and advised on how to make a joint consultation without bad-mouthing each other in front of the patient.[50] These were, however, minor obstacles to the flow of free market competition that dominated medicine.

THE MEDICAL MARKETPLACE

Historians have fitted the different kinds of medical practitioners into a model that they have only recently created: the medical marketplace. It has been a very useful virtual space for placing disparate groups of practitioners together on an equal footing. Quacks and empirics were condemned by the learned physicians and it is the latter's hostile writings that largely survive. As a result, the historical evidence creates bias and distorts the reality, which was that empirics provided cheap medicines for many, though how many is impossible to know. Placing in the medical marketplace physicians, surgeons and apothecaries, the three occupational groups which had institutional identities and claimed to be superior to other practitioners, makes it easier to recognise that, like their hated enemies, the empirics, they were also driven by financial competition.

However, a note of caution is necessary. The medical marketplace model was conceived by historians in the mid-1980s at the time of Reagan and Thatcher and reflects these politicians' ruthless free

Pertains to Medicine'': ''Protomedici'' and ''Protomedicati'' in Early Modern Italy', *Medical History*, 38, 1994, 121–42; Gentilcore, ' ''Charlatans, Mountebanks and Other Similar People': the Regulation and Role of Itinerant Practitioners in Early Modern Italy', *Social History London*, 20, 297–314; Gentilcore, 'Il regio Protomedicato nella Napoli spagnola', *Dynamis*, 16, 1996, 219–36. See also Esther Fischer-Homberger, *Medizin vor Gericht. Gerichtsmedizin vor der Renaissance bis zur Aufkärung* (Hans Huber Verlag, Berne, 1983). Ethical-legal writings were absent in early modern England, whilst the Canon and Civilian law traditions of continental Europe encouraged them as, for instance, Pauli Zacchiae, *Quaestiones Medico-Legales*, 3rd edn (Amsterdam, 1651); D. Johannis Bohnii, *De Officio Medici Duplici Clinici nimirum ac Forensis* (Leipzig, 1704). Also A. Wear, 'Medical Ethics in Early Modern England' in A. Wear, J. Geyer-Kordesch and R. K. French (eds.), *Doctors and Ethics: the Earlier Historical Setting of Professional Ethics* (Rodopi, Amsterdam, 1993), pp. 98–130.

[50] Clark, *College of Physicians*, I, pp. 284–5, 414–6; A. T. Young, *The Annals of the Barber-Surgeons of London* (Blades, East & Blades, London, 1890), p. 119.

market ideology, which, such is the influence of the present on historical writing, shaped the thinking and behaviour of even the most left-wing of historians.[51] As with modern free market ideology, the medical marketplace model can be overemphasised. It stresses economic imperatives and discounts the cultural forces that shaped medicine, especially religion, the most powerful ideology of the time. A free market attempts to expand to fill all possible niches, and yet dying, as is discussed below, was not medicalised but continued to be managed by religion. Similarly, the members of a free market know no ethical constraints or charitable impulses in the search for profit, but that was not always the case with early modern practitioners, as the concern with the poor and the example of the Helmontians, discussed in chapters 8 and 9, especially demonstrate. The medical market model is also inappropriate for understanding lay medicine, where, if any transactions occurred, they were social rather than economic. Moreover, it tends to take attention away from the cognitive and practical aspects of medicine. How practitioners perceived disease and how they treated it have been downplayed by historians intent on exploring the variety of the medical marketplace, though they have related medical theories and practice to competition for patients.[52] Despite these caveats, the model of the medical marketplace together with the destruction of the Whig view of historical progress has helped to make available for study, groups, topics and sources which had been ignored or condemned as wrong, superstitious or unimportant by historians.[53]

RELIGION

One important topic ignored until recently was the relationship between religion and medicine. Just as free market economics today

[51] One of the first historians to use the term (health economists may have anticipated them) was Harold Cook in his admirable *Decline*; Roy Porter used the concept to good effect in his *Health for Sale: Quackery in England 1660–1850* (Manchester University Press, Manchester, 1989).

[52] See the influential paper by the sociologist N. Jewson, 'Medical Knowledge and the Patronage System in Eighteenth-Century England', *Sociology*, 8, 1974, 369–85. Also C. Rosenberg, 'The Therapeutic Revolution: Medicine, Meaning, and Social Change in 19th Century America' in J. Walzer Leavitt and R. L. Numbers (eds.), *Sickness and Health in America: Readings in the History of Medicine and Public Health*, 2nd edn (University of Wisconsin Press, Madison, Wis., 1985), pp. 39–52.

[53] For instance, the patient, the poor, quacks, midwives, religion, witchcraft, diaries and autobiographies.

is the driving ideology of globalisation by multinational corporations and the justification of American economic power, so religion in the sixteenth and seventeenth centuries was the ideology that justified wars between nations and shaped public and private morality. It is not surprising, therefore, that religion should have penetrated also into the area of medicine and illness. It did so in two ways: it took on the role of medicine by explaining why disease occurred and by offering healing through prayer and repentance; and it arrived at a *modus vivendi* with physicians and their remedies and allowed secular medicine to exist without much interference.

Christianity was from its beginning a healing religion. Christ, as a sign of his divinity, had healed the sick in body and mind, and the early Church Fathers and later writers used the image of Christ the Physician, and constantly employed medical metaphors in religious teaching. Christianity was concerned with both spiritual and physical healing. The Latin word *salus* came to mean salvation, but salvation also meant health: 'God's word worketh marvellously unto the health of them that believe. And therefore in the word of God it is called the word of health, or salvation.'[54] God also caused illness; he was a destroyer as well as a healer. The Fall of Adam and Eve brought disease into the world together with death.[55] English Protestants, especially Calvinists, added to the sense of original sin the view that illnesses were also God's punishment for their own present-day sins. Illness became a sign of God's providence, a running commentary on an individual's or, in the case of plague, a community's behaviour. It was a rod or punishment and a warning, or it could also be a trial of one's faith as it was for Job.[56] However,

[54] The early English Protestant writer, Thomas Becon, *Prayers and Other Pieces of Thomas Becon*, ed. F. Ayre for the Parker Society (Cambridge University Press, Cambridge, 1844), p. 490. On early Christianity and medicine see D. Amundsen, 'Medicine and Faith in Early Christianity', *Bulletin of the History of Medicine*, 56, 1982, 326–50; also G. Ferngren, 'Early Christianity as a Religion of Healing', *Bulletin of the History of Medicine*, 66, 1992, 1–15.

[55] On the dual nature of God see, for instance, Samson Price, *Londons Remembrancer for the Staying of the Contagious Sicknes of the Plague* . . . (London, 1626), p. 6; Theodore de Beze, *A Shorte Learned and Pithie Treatize of the Plague* (London, 1580), sig. A4^{v}: 'Sinne in deede wherewith we are all borne infected, and from which all this dying commeth, by a certayne spiritual infection not without the decree of God, is conveighed and spread into all Adam his posteritie.' Burton, *Anatomy of Melancholy*, p. 114: 'the cause of death and diseases, of all temporal and eternal punishments, was the sin of our first parent Adam, in eating of the forbidden fruit, by the devil's instigation and allurement'.

[56] Andrew Wear, 'Puritan Perceptions of Illness in Seventeenth Century England' in R. Porter (ed.), *Patients and Practitioners: Lay Perceptions of Medicine in Pre-Industrial Society* (Cambridge University Press, Cambridge, 1985), pp. 55–99 and 'Religious Beliefs and Medicine in Early Modern England' in H. Marland and M. Pelling (eds.), *The Task of Healing: Medicine,*

God in his mercy mitigated the punishment of the Fall and gave to humankind the means to alleviate illness. As the Apocrypha puts it, 'The Lord hath created medicines out of the earth', and, in a verse often quoted by physicians, 'honour the physician with that honour that is due unto him for the Lord hath created him'.[57]

From the time of the early Church Fathers Christianity taught that it was permissible to use natural means to cure illness, with the proviso that the patient and the doctor pray to God to give healing power to the remedies being used.[58] The remedies, as the influential Calvinist Puritan divine William Perkins wrote, also had to be 'lawful', not magical or diabolical, such as 'all charmes or spels . . . characters and figures either in paper, wood, or waxe . . . and yet neverthelesse, these unlawfull and absurd meanes are more used and sought for of common people, then good physicke'. And he warned 'all men . . . in no wise to seeke foorth to enchanters, and sorcerers, which indeede are but witches and wizzards, though they are commonly called cunning men and women'.[59]

In a sense, Christianity gave medicine permission to exist; by incorporating it as a work of God, Christian theologians lessened the possibility of conflict between physical and spiritual healing. Clergymen and physicians taught that the Christian had a duty to look after the body, for it housed the immortal soul, and to neglect that duty affected the soul's spiritual health. Not taking care of one's health and not using the resources of medicine also wilfully lessened the lifetime that God had allotted to an individual; such action was tantamount to the sin of self-murder. However, medicines could not be used to prolong life beyond one's allotted span, and they could

Religion and Gender in England and the Netherlands, 1450–1800 (Erasmus Publishing, Rotterdam, 1996), pp. 145–69. On early modern Christianity and medicine, see also the essays in W. J. Sheils (ed.), *Studies in Church History*, vol. XIX, *The Church and Healing* (Basil Blackwell for the Ecclesiastical History Society, Oxford, 1982); O. P. Grell and A. Cunningham (eds.), *Medicine and the Reformation* (Routledge, London, 1993); O. P. Grell and A. Cunningham (eds.), *Religio Medici: Medicine and Religion in Seventeenth-Century England* (Scolar Press, Aldershot, 1996); D. Harley, 'Medical Metaphors in English Moral Theology, 1560–1660', *Journal of the History of Medicine* 48, 1993, 396–435.

[57] Ecclesiasticus 38.4, 1.

[58] Amundsen, 'Medicine and Faith in Early Christianity'; Wear, 'Puritan Perceptions of Illness', pp. 78–9. The puritan theologian William Perkins wrote, 'by prayer we must intreat the Lord for a blessing upon them [medicines], in restoring of health, if it bee the good will of God. 1. Tim. 4.3': William Perkins, *The Workes* (3 vols., London, 1616–1618), vol. I, *A Salve for a Sicke Man Or, A Treatise Containing the Nature . . . of Death, As Also the Right Manner of Dying Well*, p. 506.

[59] Perkins, *Salve*, pp. 505, 506; also Burton, *Anatomy of Melancholy*, pp. 381–4 on 'unlawful cures'.

not, in any case, counter the will of God.[60] The injunction to use medicine and to see disease as natural or as coming from God through natural or secondary causes was emphasised in times of plague when the government and most churchmen argued that a fatalistic do-nothing attitude was sinful; they also feared that behind such a view lay a disbelief in the contagious nature of plague and hence in isolation measures.[61]

Until the 1640s Protestant writers such as Perkins saw learned medicine as the best and most 'lawful' form of medicine. Calvin had praised Galen, who together with Hippocrates was the classical inspiration and source for learned physicians. By emphasising the value of learned medicine, Calvinists could use it as a substitute for the healing sacraments of the Catholic Church which they argued had no power, as well as presenting it as the proper alternative to the 'magical' healing of wise women. Calvin and his followers argued that the age of miracles was past and that the gift of healing had been given to Christ's disciples only for their lifetimes; it ceased with their deaths and had not been passed down to the present-day priests of the Catholic Church. Henry Holland, a Puritan minister and medical practitioner, saw that this gave further legitimacy to medicine and especially to his favoured version of it: 'Now then the gift [of healing] ceasing . . . the learned physician [is] the comfortable and ordinary means which God hath left unto us as long as the World endureth', and he cited the famous verse of Ecclesiasticus on honouring the physician.[62]

Learned medicine gained not only approval from Puritans but also added support in its fight with empirics. For a while it was seen

[60] Andrew Boorde, a clergyman and physician, wrote in his *The Breviary of Helthe* (London, 1547), sig. B1^{r}, that the 'patient provyde for his body, and take counsell of some expert physicion . . . at all tymes redy to folowe the wyll mynd and counsell of his phisicion, for who so ever wyll do the contrary saynt Augustine saythe "Seipsum interimit qui precepto medici observare non vult" . . . He doth kyll him selfe that doth nat observe the commaundement of his phisicion'; also sigs. B2^{v}–B3^{r}; William Bullein, 'The Booke of Compounds' in *Bulleins Bulwarke of Defence Againste all Sicknes, Sornes and Woundes* (London, 1562), fol. 2^{v}; Perkins, *Salve*, pp. 505, 506: 'all sicke persons must bee carefull to preserve health and life till God doe wholly take it away', and 'wee must not thinke that physicke serves to prevent old age or death, it selfe. For that is not possible, because God hath set downe that all men shall die and be changed'.

[61] See, for example, James Mannings, 'minister of the word', *A New Booke Intituled I Am For You All, Complexions Castle: As Well in the Time of the Pestilence As Other Times* (Cambridge, 1604), pp. 1–6, which relates the above arguments to the case of the plague.

[62] Holland, *An Admonition*, pp. 49–50; see Wear, 'Religious Beliefs and Medicine', pp. 155–9.

as God's preferred medicine in contrast to the medicine of the empirics. The dramatist Thomas Dekker echoed such a view:

> Is Sickness [the plague] come to thy doore! . . . Make much of thy Physitian: let not an Emperick or Mountibancking Quacksalver peepe in at thy window, but set thy Gates wide open to entertaine thy learned Physitian: Honour him, make much of him. Such a Physitian is Gods second, and in a duell or single fight (of this nature) will stand bravely to thee.[63]

However, physicians attacked ministers alongside empirics and charitable gentlewomen for practising medicine. Despite the occasional prayer and reminder to the physician in medical texts to invoke God's blessing on the medicines, the general impression is that the physicians did not usually reciprocate the interest that religious writers showed in their subject.[64] The basis of the physician's attacks was, ironically, religious: Calvin's insistence that everyone should keep to their calling or occupation. In *The Anatomy of Melancholy* (1621), the definitive compendium of views on madness, medicine and society in English and European culture, Robert Burton, who was a clergyman and Oxford academic, countered by arguing that any physician who objected that 'no cobbler go beyond his last, and find himself grieved that I have intruded into his profession' should look at the number of physicians who had become clergymen, and at the

> agreement . . . betwixt these two professions [of medicine and religion]. A good Divine either is or ought to be a good physician, a spiritual physician at least as our Saviour calls himself and was indeed. They differ but in object, the one of the body, the other of the soul, and use divers medicines to cure: one amends the soul through the body, the other the body through the soul.[65]

Nevertheless, from the Middle Ages physicians had often been associated in popular sayings with atheism and uncharitableness.

[63] Thomas Dekker, 'London Loocke Back at that Yeare of Yeares 1625, and Looke Forward upon this Yeare 1630', in F. P. Wilson (ed.), *The Plague Pamphlets of Thomas Dekker* (Clarendon Press, Oxford, 1925), p. 188.

[64] John Cotta, *A Short Discoverie of the Unobserved Dangers of Severall Sorts of Ignorant and Unconsiderate Practisers of Physicke in England* (London, 1612), pp. 86–94; James Hart, *The Arraigment of Urines* (London, 1623), sigs. A3^{v}–A4^{r}, and *The Anatomie of Urines . . . Or, the Second Part of Our Discourse of Urines* (London, 1625), sigs. A5^{v}–A6^{r}, p. 110; Wear, 'Religious Beliefs and Medicine', pp. 155–65; D. Harley, 'James Hart of Northampton and the Calvinist Critique of Priest-Physicians: an Unpublished Polemic of the Early 1620s', *Medical History*, 42, 1998, 362–86.

[65] Burton, *Anatomy of Melancholy*, p. 29.

John Ward noted that the saying 'Ubi tres medici, ibi duo Athei [where there are three physicians, there be two atheists], hath been an old though a false calumnie.' Though he also recorded: 'one told the Bishop of Gloucester not long since, that hee imagined that physitians, of all other men, were the most competent judges of all others in affairs of religion; and his reason was, because they are wholly unconcerned in the matter'.[66]

The new medical movements, Paracelsianism and Helmontianism (discussed below), which challenged Galenic learned medicine, latched on to such associations. Their followers attacked Galenic physicians as atheistic and uncharitable, and presented their own medicine as Christian, their practitioners being chosen of God and especially concerned with charitable medical provision for the poor. Religion thus not only allowed the practice of medicine but was also an integral part of the debate between rival medical systems. It also remained a medical resource in its own right, giving rationales for illness and offering healing through prayer from God, if not from his saints or the sacraments as in Catholic belief. Moreover, it kept medicine away from the death bed. Ministers insisted that the physician leave the bedside if the prognosis was imminent death. The time of dying was seen as a Christian ritual: the passing from this life to the next whilst beset by the temptations of the devil; a time when worldly affairs were settled and spiritual meditation prepared one for death. From the Middle Ages to the eighteenth century the 'art of dying' in its different guises helped to make dying a religious rather than a medical event. Physicians agreed, moreover, that it hurt their reputation to take money for incurable cases.[67] It was not until the later eighteenth century that death became medicalised and physicians managed dying with the use of opiates; as the performance of the art of dying declined in the Enlightenment, so the need for the patient to remain rational lessened.

[66] Ward, *Diary*, pp. 119, 100. On a medieval criticism of extortionate physicians see *The Metalogicon of John of Salisbury*, trans. D. D. McGarry (Peter Smith, Gloucester, Mass., 1971), Book 1 ch. 4, p. 18.

[67] M. C. O'Connor, *The Art of Dying Well* (AMS Press, New York, 1966); D. Stannard, *The Puritan Way of Death* (Oxford University Press, New York, 1977); P. Ariès, *The Hour of our Death* (Penguin Books, Harmondsworth, 1983); C. Gittings, *Death, Burial and the Individual in Early Modern England* (Croom Helm, London, 1984); R. Houlbrooke (ed.), *Death, Ritual and Bereavement* (Routledge, London, 1989), and *Death, Religion and the Family in England, 1480–1750* (Clarendon Press, Oxford, 1998); David Cressy, *Birth, Marriage and Death. Ritual, Religion and the Life Cycle in Tudor and Stuart England* (Oxford University Press, Oxford, 1997).

LITERATE MEDICAL KNOWLEDGE

Our knowledge of how early modern English practitioners and readers of medical works understood the nature of remedies, diseases and the healthiness or otherwise of the world around them and how their views changed or remained the same comes largely from medical writings. These were written against the background of the Renaissance recreation of Greek medicine. They express at different levels medical knowledge whose sources in the sixteenth century, as in the Middle Ages, were mainly the Hippocratic treatises (written by various authors mainly between 420 and 350 BC) and the writings of Galen (AD 129–216) who had produced a coherent and all- encompassing medical system from different strands of ancient medicine and philosophy as well as from his own researches. Arabic authors were also referred to, although they were less influential than in the Middle Ages.

In the Renaissance, as part of the humanistic love of classical knowledge, the recreation was attempted of the *prisca medicina*, the pure ancient medicine of the Greeks, and to a lesser extent of the Romans. Despite having retrieved Galenic medicine for western Europe, the Middle Ages were seen as having defiled the ancients with incorrect and 'barbarous' texts and translations. By going back to the pure founts of medical wisdom, medicine, it was believed, would be improved. Just as the reformation of religion involved a return to the original word of God, the Bible, so the reformation of medicine would take place through better knowledge of the words of medicine's founders. A landmark of medical scholarship was the 1525 Venetian Aldine Press edition of the complete works of Galen in Greek; in the same year the Hippocratic Corpus was published in Latin and the next year in Greek. The translation and editing of classical medical texts brought fame to a number of humanist physicians, with Nicolaus Leoniceno (1428–1524) chief amongst them. Italian universities, and then from the 1530s Paris, were at the forefront of retrieving Greek medicine. Between 1500 and 1600 around 590 different editions of Galen were published.[68] In

[68] R. J. Durling, 'A Chronological Census of Renaissance Editions and Translations of Galen', *Journal of the Warburg and Courtauld Institutes*, 24, 1961, 230–305. See especially Michael R. McVaugh, *Medicine before the Plague: Practitioners and their Patients in the Crown of Aragon, 1285–1345* (Cambridge University Press, Cambridge, 1993); Luis García-Ballester, '*Artifex factivus sanitatis*: Health and Medical Care in Medieval Latin Galenism' in Don Bates (ed.),

England, there were a few humanist medical scholars such as Thomas Linacre (1460? – 1524) and John Caius (1510–1573), but the medical Renaissance came largely at second-hand through the dissemination of vernacular medical texts that handed down what were often diluted versions of Galenic teaching. The one great exception was the London College of Physicians, which expected its members to know the Latin texts of Galen and Hippocrates, and which saw the propagation of Galenic learned medicine as its mission. The College has tended to have a bad press. Modern historians have often emphasised its limited membership, its authoritarian obscurantism, its persecution of empirics and poor wise women, its hostility to new ideas, and, of course, its being on the losing side in the debate between the ancients and the moderns in the later seventeenth century. With the exception of George Clark and a few others they have found it difficult to see that the College in the sixteenth century was part of a general European movement that aimed to improve medicine and make it safer.

Some of the improvement could also come by making medicine more 'methodical', by putting medical teaching into a logical order going from the most general principles to the particular details of a patient. Often such information was put into tables, or set out in a text as in a table.[69] Giambatista da Monte (1498–1552), the professor of the practice of medicine in Padua, the foremost European university of the sixteenth century, was the most famous exponent of the methodical teaching of medicine. Influenced by Linacre's Latin translation of Galen's *Method of Healing* (1519), da Monte tried to recreate a Galenic practice of medicine which, rather than merely relating treatment to the causes of disease as with the medieval *practica* or compendia on practice, also considered the patient's constitution, lifestyle and environment. On the continent few medical writers followed da Monte's time-consuming method, and even fewer did so in England.[70] However, the patient-centred

Knowledge and the Scholarly Medical Traditions (Cambridge University Press, Cambridge, 1995), pp. 127–50.

[69] Alexander Read, 'A Treatise of the First Part of Chirurgery' in *The Workes of that Famous Physitian Dr. Alexander Read*, 2nd edn (London, 1650) is self-consciously set out in a methodical fashion; see p. 14: 'Having described as it were in a table, the divers sorts of extraneous bodies, to help the memory.'

[70] Two treatises on bloodletting, by Nicholas Gyer, *The English Phlebotomy: Or, Method and Way of Healing by Letting Blood* (London, 1592) and by Simon Harward, *Harwards Phlebotomy: Or, a Treatise of Letting of Bloud* . . . (London, 1601), are examples of learned and methodical vernacular medical works. A. Read, 'Chirurgicall Lectures of Tumors and Ulcers' and 'A

nature of Galenic methodical medicine was retained as part of the ideological rhetoric used by the learned physicians to distinguish themselves from their competitors, the empirics, who treated the disease and not the patient. By the later seventeenth century 'method' was attached to Galenic physicians as a term of abuse, signifying blind adherence to old-fashioned dogma,[71] but in the sixteenth century it symbolised the attempt to put into order the cutting-edge knowledge that was being produced, paradoxically to the modern mind, by scholars. Before discussing how English vernacular texts were seen by some as part of the Renaissance push to improve medicine and by others as inimical to the new learned medicine, it is worth looking at the medical theory that lay at the heart of Galenic therapeutics, whether in Latin or in vernacular texts, and which informs much of the present book.

THE HUMORAL THEORY OF HEALTH AND ILLNESS

Galenic physicians from the Middle Ages followed the humoral theory as did much of the literate population. Four humours or fluids – blood, phlegm, yellow bile or choler, and black bile or melancholy – made up the body and, like the Aristotelian four elements (earth, water, air and fire) out of which the sublunary world was formed, they were the products of the combinations of the four qualities of hot, cold, dry and wet that Aristotle (384–322 BC), the Greek philosopher, had stated were the primary constituents of the world. Figure 1 shows how the microcosm or little world of the body had the same qualitative foundation as the macrocosm, or the world at large. It also indicates how the humours were linked to the seasons, so that in spring blood was in greatest quantity and at that time a routine annual prophylactic bleeding would be carried out. The four ages of humankind also corresponded to the four humours, so that in old age phlegm predominated. Every person had an individual

Treatise of the First Part of Chirurgery' in *The Workes* set out to teach surgery methodically. John Caius, *De Medendi methodo libri duo, ex CL Galeni Pergameni, et Jo. Baptistae Montani Veronensis, principum medicorum, sententia* (Basle, 1544). Andrew Wear, 'Explorations in Renaissance Writings on the Practice of Medicine' in A. Wear, R. K. French and I. M. Lonie (eds.), *The Medical Renaissance of the Sixteenth Century* (Cambridge University Press, Cambridge, 1985), pp. 118–45, 312–17; J. Bylebyl, 'Teaching Methodus Medendi in the Renaissance' in F. Kudlien and R. J. Durling (eds.), *Galen's Method of Healing* (E. J. Brill, Leiden, 1991), pp. 157–89.

[71] See, for instance, George Starkey, *Nature's Explication and Helmont's Vindication* (London, 1657), sig. A6^{v}, pp. 51–3.

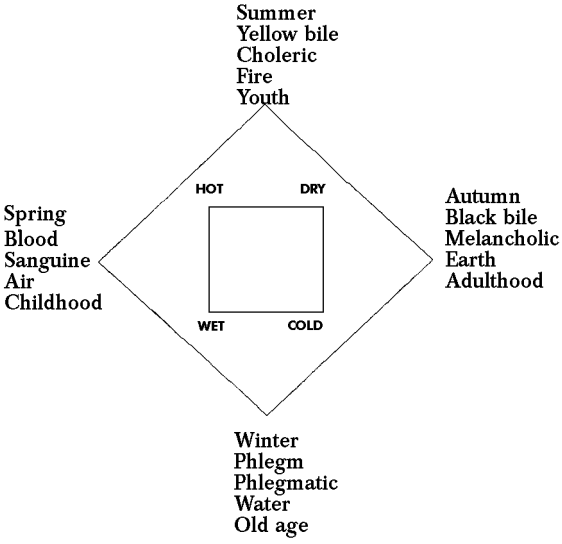

Figure 1 The humoral system

mixture of humours, their constitution, temperament or complexion, in which normally one humour was dominant and shaped their physical and psychological predisposition. They would be phlegmatic, melancholic, choleric or sanguine.

Regimens or rules for healthy living were supposed to take the humoral temperament of the individual into account. So choleric patients should avoid hot and dry foods and eat ones with moist ingredients. Treatment was based on the allopathic principle that opposites cure opposites, so a hot illness was cured by a cold remedy. The assessment of a patient's and a remedy's heat, coldness, etc. was subjective, though it was given a sense of precision by the use of degrees of heat, wetness, etc.[72] However, as is discussed in chapter 3, it was believed not only that illness was the result of an imbalance in the humours or the qualities, but also that it could be caused by a humour taking on a pathological character or by pathological humours being generated within the body, sometimes through

[72] Aristotle in *On Generation and Corruption*, $329^{b}7-330^{a}29$ argued that hot, cold, dry and wet were the primary qualities. Sanctorius Sanctorius (1561–1636), professor of the theory of medicine at Padua and one of Galileo's acquaintances, at the beginning of the seventeenth century invented a thermometer and a hydrometer so that the four qualities could be measured objectively.

contagion by some poison as in plague. The result was that putrid, corrupt or burnt humours were often seen as the cause of disease, and the evacuative procedures of bleeding, purging and vomiting that figure largely in the story of the English and European practice of medicine were the favoured therapies. They were also employed to recreate a balanced humoral mix and to get rid of a *plethora* or excess of a humour.

The humoral theory and Galenic medicine in general were challenged first by Paracelsian and then by Helmontian medicine, both of them based on chemical principles (on salt, sulphur and mercury, and on water respectively). Both saw chemical processes in the body in vitalistic terms, but Helmontianism was less tainted with magical associations, it often repudiated astrology and it was more careful in its experimental methods than Paracelsianism. Helmontians stood half-way between Paracelsianism and the 'new science' of Galileo, Descartes, Boyle and Newton that sought to replace the old qualitative vision of the cosmos and the body. In England, Paracelsianism as a medical philosophy began to make an impact in the late sixteenth century, though it was Paracelsian chemical remedies rather than Paracelsian theory that were popularised by John Hester and others. English surgeons like William Clowes, John Banister, George Baker and John Woodall also espoused Paracelsianism, which is understandable given their routine use of mercury to cure the pox, a remedy of which Paracelsus cautiously approved, but to which Galenic writers were often opposed.[73] In the Civil War period Paracelsian medicine, as Charles Webster has shown, became popular with reformers, both for its medical theory and its Christian ethic. As chapters 8 and 9 indicate,

[73] See William Clowes, *A Right Frutefull and Approoved Treatise for the Artificiall Cure of that Malady Called in Latin Struma, and in English, the Evill, Cured by Kinges and Queenes of England* (London, 1602), sig. A2^{v}: 'I had heere likewise thought good to have spoken somewhat of Paracelsus, but I must confesse his Doctrine hath a more pregnant sense, then my wit or reach is able to construe: onely this I can say by experience, that I have practised certaine of his inventions Chirurgicall, the which I have found to be singular good and worthy of great commendations.' Surgeons such as Clowes and Woodall did give very brief outlines of Paracelsian theory. A lawyer, Richard Bostocke, wrote the first major English Paracelsian treatise: *The Difference Betwene the Auncient Phisicke . . . and the Latter Phisicke* (London, 1585). C. Webster, 'Alchemical and Paracelsian Medicine' in Webster (ed.), *Health, Medicine and Mortality in the Sixteenth Century* (Cambridge University Press, Cambridge, 1979), pp. 313–34, argues that interest in alchemical medicine was endemic in sixteenth-century England, and against A. Debus, *The English Paracelsians* (Oldbourne Press, London, 1965), citing pp. 49, 80–1, 101–5, 127, that in the last twenty-five years of the sixteenth century Paracelsian ideas became widely known in England.

the medicine of the Flemish nobleman-physician and devout Christian Johannes Baptista van Helmont (1579–1644) and his followers then provided from the mid-seventeenth century a strong alternative to Galenic treatments; that it failed indicates the strength of some of the elements of traditional therapeutics.

THE ENGLISH VERNACULAR MEDICAL TEXTS

Knowledge of medical theories and therapeutic practices was largely communicated to practitioners and to the literate public by vernacular medical texts.[74] The vast majority of the sixteenth- and seventeenth-century medical books published in England were written in English and not in Latin, the international language of scholarship. This created a spectrum from popular to elite medicine, ranging from remedy books, giving lists of medicines and their ingredients for particular diseases, and herbals, to the more complicated, theoretically-based regimens, and textbooks explaining medical theory and practice. There were also works on specific diseases, such as plague treatises, works on medicinal springs and spas, and textbooks on medicine and surgery explicitly written for practitioners. Distinctions between lay and medical readerships were blurred and both groups might read works which were ostensibly for

[74] Despite what appears to be an educational revolution between 1558 and the 1640s, the poorest part of the population remained illiterate. Male literacy in higher social groups such as the gentry, yeomen and merchants increased, while husbandmen, poor artisans, labourers and servants continued to have high illiteracy rates. Nevertheless, as Keith Wrightson and Margaret Spufford have pointed out, the need to be literate was felt by the poorest and much of oral culture was in the process of being put into print. Some parishes, especially where there was a school or teacher, had rates of male illiteracy as low as 28 to 40 per cent in the early 1640s, while other parishes had rates as high as 90 per cent. Reading on its own was much more widely practised than reading and writing. Women were often taught only to read. It is impossible to calculate rates of reading, as reading unlike writing leaves behind no record. However, despite the large gains in literacy, half the population (60 per cent women, 40 per cent men) was probably illiterate in 1750 (Peter Laslett, *The World We Have Lost – Further Explored* (Methuen, London, 1983), pp. 232–3), and there were still many whose culture was totally oral, though their numbers were declining. Laurence Stone, 'The Educational Revolution in England 1560–1640', *Past & Present*, 28, 1964, 41–80; David Cressy, *Literacy and the Social Order* (Cambridge University Press, Cambridge, 1980); Margaret Spufford, *Small Books and Pleasant Histories* (Methuen, London, 1981), ch. 2; Keith Wrightson, *English Society 1580–1680* (Hutchinson, London, 1982), pp. 183–99; Laslett, *The World We Have Lost – Further Explored*, pp. 228–37; R. A. Houston, *Literacy in Early Modern England: Culture and Education 1500–1800* (Longman, London, 1988); Peter M. Jones, 'Book Ownership and the Lay Culture of Medicine in Tudor Cambridge' in Marland and Pelling (eds.), *The Task of Healing*, pp. 49–68.

the other.[75] In contrast to the 153 different vernacular medical works that Paul Slack has found were published in England from 1486 up to the end of 1604 (in 392 editions), the number of Latin medical works published in England up to 1640 was paltry. Linacre's and Caius' Latin translations of Galen were published abroad, as was William Harvey's work announcing his discovery of the circulation of the blood (1628). Thomas Mouffet's chemical-medical writings and his 'medical letters' were published in Frankfurt, whilst his treatise on blockage of the mesaraic veins was issued from Basle. A few works were printed in London, such as Thomas Geminus' shortened version of Andreas Vesalius' massive and famous work on anatomy, which was printed there in 1545 and reprinted in 1552, and Thomas Lorkyn's treatise on regimen for students (1562). A treatise on melancholy by André Du Laurens was translated from French into Latin in 1599, as was Brice Bauderon's *Pharmacopea* in 1639; both were published in London.[76] Charles Webster has calculated that between 1640 and 1660 238 medical books were published, of which 207 were in English and 31 in Latin.[77] The figures, however, hide what was probably a large number of Latin medical books imported from the continent.

Publishing Latin medical works abroad ensured they reached the larger pool of continental learned readers, whilst writing in English meant, as Caius put it when explaining why he was determined never to publish again in English, that 'the commoditie of that which is so written, passeth not the compasse of Englande, but remaineth enclosed within the seas'. He was also contemptuous of the 'iudgement of the multitude', and deplored how 'the common settyng furthe and printig of every foolishe thyng in englishe, of phisicke unperfectly . . . diminishe the grace of thynges learned set furth in thesame'.[78] Latin texts marked out, for some, true scholarly medicine; Latin ensured that medical knowledge was limited to the few, and this was justified on the grounds that it discouraged unlearned, and hence unskilled, practitioners and preserved the integrity of

[75] Paul Slack, 'Mirrors of Health and Treasures of Poor Men: the Uses of the Vernacular Medical Literature of Tudor England' in C. Webster (ed.), *Health, Medicine and Mortality in the Sixteenth Century* (Cambridge University Press, Cambridge, 1979), pp. 237–73.

[76] J. W. Binns, *Intellectual Culture in Elizabethan and Jacobean England. The Latin Writings of the Age* (Francis Cairns (Publications), c/o University of Leeds, 1990), pp. 266–7, 379–80.

[77] Webster, *The Great Instauration*, p. 267.

[78] Caius, *A Counseil Against the Sweat*, p. 6.