

# WILLIAM HILLARY

## A PUPIL OF BOERHAAVE

by

C. C. BOOTH

WHEN Boerhaave died at Leyden in 1738, the *Gentleman's Magazine* in London wrote: 'The University has lost its chief glory, and the City of Leyden, at a moderate Computation, twenty thousand pounds sterling a year, which she gained by his pupils from Great Britain, without reckoning those from most other Nations in Europe.\* This estimate, as is usual with the popular press, was something of an exaggeration but it serves to illustrate the extraordinary reputation of the greatest clinical teacher of the eighteenth century, Hermann Boerhaave, Professor of Medicine at Leyden University from 1714 to 1738. It has been demonstrated that during his years at Leyden he taught nearly two thousand medical students, of whom as many as a third were English-speaking.<sup>1</sup> Peter the Great is said to have studied under Boerhaave. His more conventional pupils included Albrecht von Haller, who later played the major part in the foundation of the Göttingen Medical School, and Gerhard van Swieten, physician to Maria Theresa and the father of medical teaching in Vienna. He also directly influenced medicine in Scotland for he taught Alexander Monro, John Rutherford, Andrew Plummer and Charles Alston, the first Professors at the Medical School in Edinburgh which after Boerhaave's death inherited Leyden's position as the centre of medical teaching in Europe.<sup>2</sup>

Not all his pupils achieved such immortality. Many became competent physicians, too busy perhaps for literary endeavour, too obscure to influence the history of their time. There were others, however, whose works reveal to this day, as do those of Haller, the influence and encouragement they derived from their teacher at Leyden. Among these was an Englishman, Dr. William Hillary, a physician who enjoyed no outstanding reputation in his lifetime, but who is remembered today for the book that he wrote on the *Diseases of Barbados*. This book is one of the first treatises written by an English physician which deals specifically with tropical diseases. Of greater significance, it contains what appears to be the earliest account of tropical sprue, a description which has been noted by Garrison (1929)<sup>3</sup> and Major (1939)<sup>4</sup> and which is referred to by contemporary writers such as Wintrobe (1961),<sup>5</sup> Badenoch (1960)<sup>6</sup> and Wells (1962).<sup>7</sup> Relatively little is known of this early colonial physician.<sup>8</sup> Recently, however, a study of the letters of his friend, Dr. John Fothergill, has thrown further light on Dr. Hillary's origins and on the reasons why he found himself practising on the remote island of Barbados.<sup>9</sup> Information has also been obtained from a study of his published works. It is now possible to give an account

\* *Gentleman's Magazine*, 1738, 8, 491.

of his life which reveals him as one of Boerhaave's most able pupils, a physician whose belief in the value of a scientific approach to clinical medicine clearly derives from his great teacher at Leyden.

William Hillary was a Yorkshireman.<sup>8</sup> He was born in Wensleydale, the loveliest and broadest of the Yorkshire Dales, on 17 March 1697.\* He came from a Quaker family. His father, John Hillary, born in 1666, appears to have become a Quaker as a young man and his position among the Friends must have been much strengthened in 1692 when he married Mary Robinson,† daughter of Richard Robinson of Countersett, head of the leading Quaker family in Wensleydale. George Fox had stayed in his house at Countersett on the second of his visits to those parts.<sup>9</sup>

John Hillary and his bride lived for the early years of their married life at the farmhouse called Birkrigg, an isolated and lonely spot at the head of Wensleydale. In summer it is a lovely place. The grey stone farm buildings stand in a group of trees on a high bank above the river Ure. The river here is a rushing stream passing from its wild moorland beginning to the wide green valley of Wensleydale beyond. The green meadows and dry-stone walls around the farmhouse stretch upwards to the moors of Widdale Fell above. Eastwards there is the long view down Wensleydale, Wether Fell and Addleburgh outlined against the sky on the south and northwards the ridge of Stags Fell, Abbotside and Ellerkin separating the valley from Swaledale. In winter, it is bleak and cold, the fields empty, cattle keep close and warm in the barns. During the long winter evenings, when snow had drifted round the lonely farm buildings and blocked the road from Hawes, the isolation of Birkrigg must have been complete.

The Hillarys had several children during those early years at Birkrigg, Ann born in 1693, Isaac, the eldest son, born the following year, two other girls who did not survive, and then in 1697, William, the future physician, named after his grandfather. Within two years of William's birth, however, the Hillarys had moved from Birkrigg. Probably they needed a larger house for the growing family. It is also likely that they wanted to be in a less isolated place, nearer to Mary Hillary's relations at Countersett. This may have been the reason for their choice of Burtersett, a small village on the south side of Wensleydale, four or five miles down the valley from Birkrigg. Here they would be only two miles from the Robinsons at Countersett, where they would attend Quaker meeting, and close to other important Quaker families such as the Fothergills of Carr End. It was one of these Fothergills, later a leading physician in eighteenth-century London, who played a large part in influencing the most important decision of William Hillary's life.

Four more children were born to the Hillarys in Burtersett, Margaret in 1699, Mary in 1702 and another son, Richard in 1703. Rachel, the youngest,

\* In the records of the Society of Friends, William Hillary's date of birth is given as the 17th of the first month, 1696/7 (*Yorkshire Births*, Library of Society of Friends, London). This has been misinterpreted by both Shilstone (1953) and Booth and Pickles (1957) as referring to January 1697. Until the introduction of new style dating in 1752, however, the first month in the Quaker calendar was March. January would have been recorded as the eleventh month, 1696/7.

† 'John Hillary of Birchrigg, Aigarth, Yorkshire' was married to Mary Robinson at John Robinson's in Countersett on 22nd of 4th month, 1692 (*Yorkshire Marriages*, Library of Society of Friends, London).

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was born in 1705.\* William Hillary's early years were therefore spent as a member of a large family, in this small Yorkshire village, where the family home is known as Hillary Hall† to this day. Nothing is known of his schooling. He must have learnt the Latin then essential for a physician, yet his name does not appear in the Register of Sedbergh School, the best school in the North Country and only twenty miles away.

By 1715, he had decided on the customary first step towards a medical career. On 29 December he was apprenticed to an apothecary, Benjamin Bartlett, for a period of seven years.‡ Benjamin Bartlett was a Quaker who was a leading citizen of the growing town of Bradford in Yorkshire.<sup>10</sup> Apart from his success as an apothecary, he was an active member of the Society of Friends. He travelled as a Minister, was a friend of the Fothergills of Carr End and must also have been known to John Hillary. He was an excellent master. His house, wrote Gilbert Thompson later, might be called 'The Seminary of Ingenious Physicians.'<sup>11</sup> John Fothergill of Carr End, the famous London physician already referred to, was among those who were later to serve their apprenticeship with Benjamin Bartlett at Bradford.<sup>12</sup> Here Hillary would learn about the actions of drugs and how to prepare them; he would visit patients in their homes, taking medicines for his master, getting experience of sickness, suffering and death. How long he stayed in Bradford is uncertain, but it is likely that he was released before the end of his seven years. Some time between 1720 and 1722 he went on to Leyden University to take his medical degree, an essential step if he was to become a physician.

Leyden was a long way from the Hillary home in Wensleydale. Yet it was a natural choice for a Quaker who wanted to study medicine. As a dissenter the Universities of Oxford and Cambridge were closed to him, but there was no religious bar to entry at Leyden. The story of its foundation in 1575 is well known. William the Silent offered the citizens of Leyden either a University or relief from taxes for ten years as a reward for their courageous stand against the Spaniards in a desperate siege the year before. The far-seeing citizens had chosen the University and it is to their credit that it came to enjoy a degree of academic and religious freedom similar to that of Padua.

In 1720, the Leyden Medical School was at the height of its fame, its reputation world-wide. This was predominantly due to the influence of Hermann Boerhaave. A graduate of the University of Harderwyck in 1693, Boerhaave had been appointed lector of theoretical medicine in 1701 and became professor of

\* The births of the Hillary children are recorded in *Yorkshire Births* at the Library of the Society of Friends, London. On a much-weathered stone in the Friends' Burying Ground at Hawes, Yorkshire, the initials R.H. and the date 1773 can with difficulty be recognized. This stone marks the resting place of Rachel Hillary, one of the only remaining traces of the Hillary family in Wensleydale today.

† The family home at Burtsett passed out of the hands of the Hillary family in the early nineteenth century when it was sold by Sir William Hillary, second son of Dr. William Hillary's younger brother Richard. Sir William Hillary is remembered for the part he played in the foundation of the Royal National Lifeboat Association (information kindly provided by Mrs. Mary Hopkirk).

‡ Among a file of notes on the Hillary family in the records of the Society of Genealogists in London, the following has been preserved: '1715 Dec. 29. William son of Jno Hillary yeom appt. to Benj. Bartlett of Bradford apoth. for 7 years.' William Hillary's apprenticeship to Benjamin Bartlett is also attested by J. C. Lettsom in *The Works of John Fothergill M.D. . . . with some account of his Life*, London, C. Dilly, 1784, p. iv.

medicine in 1714. But he was a great deal more than that. A master of mathematics, chemistry, botany and physics, as well as the leading physician of his age, Boerhaave was a clinical teacher who sought to inculcate a scientific spirit of inquiry into the practice of medicine. He emphasized the importance of the primary sciences in the training of a physician and encouraged the practice of correlating pathological changes found by dissection with clinical observations. As a clinical teacher, he derived great inspiration from physicians such as Sydenham, whose careful descriptions of disease at the bedside recall the observations of the Hippocratic School.<sup>13, 14</sup>

It was in the environment of such ideas that William Hillary studied at Leyden. No record of his life there has survived. But he no doubt found the flat country of Holland very different from the hills and valleys of his native dales. He probably took advantage of the students' privilege to obtain his wine and beer tax-free. He would certainly have visited the famous public Anatomy Hall, full of extraordinary objects collected from various parts of the globe. At the entrance he would have seen, among other oddities, two elephants' heads, a pair of Laplander's breeches, two East Indian tigers, a parturition chair, and a 'great Knife taken from a Rioting Fellow'. Within, he would find things more gruesome. There were 'somme monstrous bones'. He had a large variety of skeletons to choose from—among them 'an Asse upon which sits a Woman that killed her daughter's child', or 'a French Nobleman who ravished his sister and afterwards murdered her, and was beheaded at Paris, and given to the Anatomie'. He could also see a 'Mumie of an Egyptian Prince about 1800 years old', a 'Japan letter of a Whore', the 'skin of a man dried like parchment', 'some mens gutts', and a wide variety of pathological specimens such as 'Preserved Fingers with Nails on 'em'. These items are chosen at random from the English edition of the catalogue.<sup>15</sup>

On 24 July 1722, he had to defend his thesis in public and afterwards entertain the professors and students. It was written in Latin and entitled *Dissertatio Medicas Inauguralis Practica de Febribus Intermittentibus*.<sup>\*</sup> His thesis, as was then customary, was published and copies are preserved both at the University of Leyden and at the British Museum. The dating of his thesis provides a clue to some of his medical friends at Leyden. He must have known Andrew Plummer, a Scotsman who graduated on the day before he did, with a thesis entitled *De Phthisi pulmonali*.<sup>16</sup> Andrew Plummer was to become first professor of chemistry and materia medica in the new Medical School at Edinburgh in 1726.

Hillary's father had not lived to see his son graduate. He died in 1721. For a yeoman farmer he was relatively wealthy, well able to afford the expense of educating his second son at a foreign University. He left the bulk of his estate to his eldest son Isaac. William's share was £300, 'including the moneys he has had'.<sup>†</sup> Since this probably refers to the expense of his education at Leyden, it is clear

\* M. D. Thesis, University of Leyden.

† Under John Hillary's will, Isaac received property at Hawes, Gayle and Appersett, as well as the Birkkrigg farm. He also inherited Rigg House and the family home at Burtersett. These properties indicate the extent of the Hillary estates in Wensleydale. The inventory listed 'household property, wooll, six horses and two calves, four stirks, thirteen steers, two fat steers, 147 old sheep, fifty-four hogs, Hay and husbandry gear'. The total value was £980 os. 6d., of which the major part, £730 os. od., was made up of 'Money's owing'. *M.S. Will of John Hillary*, City Library, Leeds.

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that William did not start life with much capital. He must now put his education to good account.

About 1723 or the year following, William Hillary settled as a physician in the small cathedral town of Ripon in Yorkshire. Ripon was only thirty miles from the family home at Burtersett, on the banks of that same Ure that runs down Wensleydale, now a broad placid river flowing down to its junction with the Swale to form the Yorkshire Ouse at Boroughbridge. The town was a market centre for the surrounding countryside, rich, rolling farmland which was very different to the wildness of the upper part of Wensleydale. Ripon then, as now, was renowned for its proximity to Fountains Abbey. It is also famous for the horn which is sounded at night in the Market Square, a custom dating from the time of Alfred the Great. When Hillary lived in Ripon, he would have heard the horn at nine o'clock each evening, blown then as it still is today.

In this pleasant country town he started practice. By 1726, he had begun to record the changes in the weather and the epidemics he encountered in an attempt to correlate weather and disease. He was one of the first physicians in England to attempt to do this. A year later, in 1727, Dr. Wintringham of York published his *Commentarium Nosologicum*, a similar study in which he gave a careful record in the relationship of weather to disease in the near-by City of York where he practised.<sup>17</sup> Hillary was much discouraged when this work came out since he felt himself forestalled. But in the interest of comparing results, he decided to carry on his researches and he continued them until the end of 1734, when he left Ripon. His account was published some years later. This work makes it possible to study the pattern of disease as Hillary saw it in a country physician's practice more than two hundred years ago. In 1726, for instance, he saw more than sixty patients with smallpox, nearly as many as he had seen in an epidemic two years earlier. In 1731, he encountered a curious epidemic disease which he had not seen previously. Children or young people under twenty would develop a fit of shivering and then their face and neck swelled up. The swelling was occasionally unilateral but usually it affected both sides and sometimes it was remarkably severe. All his patients recovered completely in two or three weeks. This is a clear description of mumps and it seems curious that Dr. Hillary, with several years' experience as an apothecary's apprentice, his studies at Leyden and at least seven years' practice behind him should never have seen it before. In 1734, he describes his experience of a world pandemic of influenza. According to the papers, it had occurred in Europe, Asia, Africa and America. Few escaped it in Yorkshire, writes Hillary, and in the city of Leeds at least one-third of the population were affected. He made no important discoveries and no clear relationship between weather and disease emerged, but his observations represent a worth-while attempt to study this problem in a scientific manner, and they illustrate the energy and enthusiasm he brought to his work in a small country town.

The disease which interested him most during this period was smallpox, one of the scourges of eighteenth-century life. It was a disease which attracted a

great deal of attention. The practice of inoculation had recently been introduced into England and its value was hotly debated during the first half of the century. Hillary had made notes of the epidemics which he had seen in his practice and in 1732, at the instigation of his friends, he was encouraged to prepare his notes for publication. The result was his first book, *A Rational and Mechanical Essay on the Small Pox*, which was first published in 1735 (London, G. Strahan). This book is not remarkable for its description of the disease, nor for its treatment. Hillary adopts the current methods of his time, duly acknowledging his debt 'to the sagacious and learned Boerhaave'. He enthusiastically recommends the customary regimes of bleeding and purging, thought from time immemorial to remove evil humours from the body. It is alarming to read the amount of bleeding that his patients might have to endure. Several were ordered to lose as much as 120 or 140 ounces of blood, an amount likely to be almost fatal to all but the fittest and most phlegmatic. But there are two noteworthy statements in the preface. The first deals with the recently introduced practice of inoculation. Hillary states, with an unusual clarity and simplicity, the nature of the problem.

Its Success, [he wrote] in this . . . Climate, remains somewhat doubtful, and must be so, 'till the following Propositions are clearly proved, and confirmed by just Observations or their Contraries: viz. 1. *That having the Smallpox by inoculation, is less hazardous than having them in the natural Way is.* And 2. *That the having them that way is as sufficient a Security against the having them a second time as the other is.*

These propositions are so clearly put forward that they warrant the practical trial which he should himself have carried out. Hillary's style is characteristically forthright and to the point. The reason why it is so difficult to come to clear conclusions is, he tells us, 'that in most cases (even in the greatest concerns of Life) Men first form to themselves Opinions, and then think and argue with too strong Prejudices for those Opinions . . . .'

The second and more striking extract from his preface is as clear a plea for the importance of a scientific approach to medicine as has ever been written.

It appears how necessary it is for a Physician who would be Successful in his Practice, or make any tolerable Figure in his Profession, to be well acquainted with the structure of the Human Body, the use of all its Parts, the Principles of Mechanical Powers, the Laws of Motion and Hydraulics, with a sufficient skill in geometry and Mathematics, to apply them; as well as a knowledge of Chymistry, Pharmacy, and the Virtues and Doses of Medicines. For it is by a proper Use and Application of these, both in our Practice and Reading, that we can account for the Causes and Effects of Diseases, and the manner of the Remedies acting, so as to produce their saluterious effects. It is by these and accurate observations in Practice, that we must improve our Knowledge in the State of Physic and Disease; it is this Knowledge, and these Abilitys, that must be the distinguishing *Characteristic* of a true *Physician*, from an *Empiric*; it is by this Method of reasoning from Data, founded upon Observations and real facts, that the *Healing Art* must be improved and brought to a State of Perfection; for if we once quit our Reason for Mystery, and abandon a just Method of Mechanical and Geometrical Reasoning, for the unintelligible terms of Occult Faculties and Qualities, with all such like Metaphysical and Chymical Jargon and Nonsense, heretofore too much used in the Schools; we must wander through endless Mazes, and dark Labyrinths, playing at Hazard with Men's Lives, and suffer ourselves to ramble wherever conceited Imagination, or whimsical Hypothesis will lead us.

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These words are written in the forthright language characteristic of a Yorkshire dalesman, but the ideas clearly derive from Boerhaave's teaching at Leyden. They illustrate the philosophy of medicine that was to activate Hillary throughout his life.

*The Rational and Mechanical Essay on the Small Pox* was published as a second edition in 1740 and it was in this edition that Hillary added the 'Principal variations of the Weather and the Concomitant Epidemic diseases as they appeared at Rippon and the circumjacent parts of Yorkshire' (London, C. Hitch; Bath, J. Leake). In this edition also he described how he was induced to leave Ripon, in August 1734:

About this time dy'd the eminent Dr. Bave of Bath, [he wrote] and being weary of the Fatigue of Country Practice, I was advised by some of my Friends to remove thither, in which Place chonical Distempers are so frequent, and acute Epidemical so seldom appear, that I could not pursue these observations, or carry them on longer.

These comments justly describe the differences in Hillary's work that would result from a move to Bath. Yet there were other differences more important. Bath, the most fashionable watering place in England, frequented by royalty and the nobility, was a whole world away from the peaceful country town of Ripon. It attracted some of the most successful physicians in the country, with whom the young Yorkshireman would have to compete. Hillary must only have been human to have had qualms when he embarked on his journey southwards.

Dr. Hillary arrived in Bath when it was at the height of its fame, in its most golden age. The waters of Bath had been known since before the Romans built their baths there and were renowned throughout England in Medieval, Tudor and Stuart times. But until the early eighteenth century it was essentially a resort for the sick, for those genuinely seeking a cure. In 1702 and 1703, however, Queen Anne visited Bath. As the natural leader of English Society, she was followed by an immense crowd of people seeking diversion and entertainment. Among these people was a professional gambler, the famous Beau Nash, who obtained the position of Master of Ceremonies. Richard Nash was a magnificent organizer, a social genius. He reorganized the Pump Room, arranged dances at the Assembly Rooms and insisted on rules of conduct, drawn up as a Code of Behaviour, which set standards for 'polite Society' which have endured to this day. His activities earned him the titles of Uncrowned King of Bath, the Arbiter of Elegance, the Dictator of the manners of Polite Society.

At this time the leading physician was Dr. William Oliver, the inventor of the Bath-Oliver biscuit, another Leyden student, who had started practice in Bath in 1725. In 1740 he was to be appointed physician to the Bath General Hospital, in whose foundation he had played a leading part. The architect John Wood the elder, another Yorkshireman, was transforming Bath into the lovely city it remains today. The Royal Crescent and the Circus belong to the second half of the eighteenth century, but when Hillary arrived Queen Square, the 'true consummation of English Palladian architecture' was almost completed.

Prior Park, the incomparably magnificent home of Ralph Allen, was being built. Here Allen entertained Alexander Pope, Dr. Warburton, Gainsborough and William Pitt. David Garrick and his old rival Quin met at this house. For the first four decades of the eighteenth century, the cream of English Society took itself to Bath for the summer, there to divert itself with the waters, conversation, music, dancing, the theatre, and the pleasure of being seen in the company of the most distinguished people in the land.<sup>17</sup>

It was a very different world for the young physician from Yorkshire, to whom as a Quaker the pleasures of Society were sinful and therefore to be shunned. But he no doubt started his practice among the numerous members of the Society of Friends, with whom he seems to have been successful. Then, in 1737, he heard of an interesting accident. Charles Melsom, a cooper, had some labourers working near a place called Lincomb, a small village in a valley a little to the south of Bath, and he used some water from a local spring to make a bowl of punch for his workmen. Unfortunately, there seemed to be something strange about the water, for the punch turned to a blackish purple colour and some of the workmen refused to drink it. William Hillary heard about this accident from a neighbour and at once concluded that the water must be a chalybeate water.\* 'Some time after,' he wrote later, 'going to see the Spring, I presently found from its smell and taste, and a few slight experiments, that it was so, but that it differed very much in several respects from every other spring of that kind, which I had hitherto seen.' In the summer following, in 1738, he began to make experiments on the water, and this 'being taken Notice of, led great numbers of People to the Place'. He described these experiments together with his views on the uses of the waters, in his book *An Inquiry into the Contents and Medicinal Virtues of Lincomb Spaw water near Bath*, published in 1742 by C. Hitch of London and J. Leake of Bath.

In this book, he dignifies Lincomb with the name of a Spa. He describes it as 'a pleasant little valley on the South side of, and about half a mile distant from, the City of Bath. The natural agreeableness of the Place is increased by the conveniences made for the Accomodation of those who resort to the Spaw.' Clearly there had been some development of the site. Though claiming to be disinterested, he advocated the waters of Lincomb with unabashed enthusiasm. The spring produced 1800 gallons per day, enough for all, although a mere nothing compared to the half-million gallons put forth in Bath each day. The smell was variable before the spring was covered in. 'It might sometimes have been perceived by a Nice Organ at a distance of 30 or 40 yards', he wrote. The water contained 'large quantities of elastic Air', a 'subtile chalybeat, principle' and a 'Quantity of an alkaline Earth'. It contained an 'alkaline, Lixivial Salt' and a portion of iron. It differed from other waters, such as those of Harrogate, Croft and Tunbridge. The Bath waters contained only one-tenth of the steel of the Lincomb water. It most clearly resembled the waters of the continental Spa, Geronster. Its uses, were, according to the custom of the time, legion. It could be prescribed for 'Disorders of the stomach and Bowels arising from Loss of Appetite and Indigestion, i.e. Heartburn and Belchings. Inert

\* Chalybeate water: a mineral water which contains iron.





Fig. 1  
Hillary Hall, home of the Hillary family in Burtersett, Wensleydale

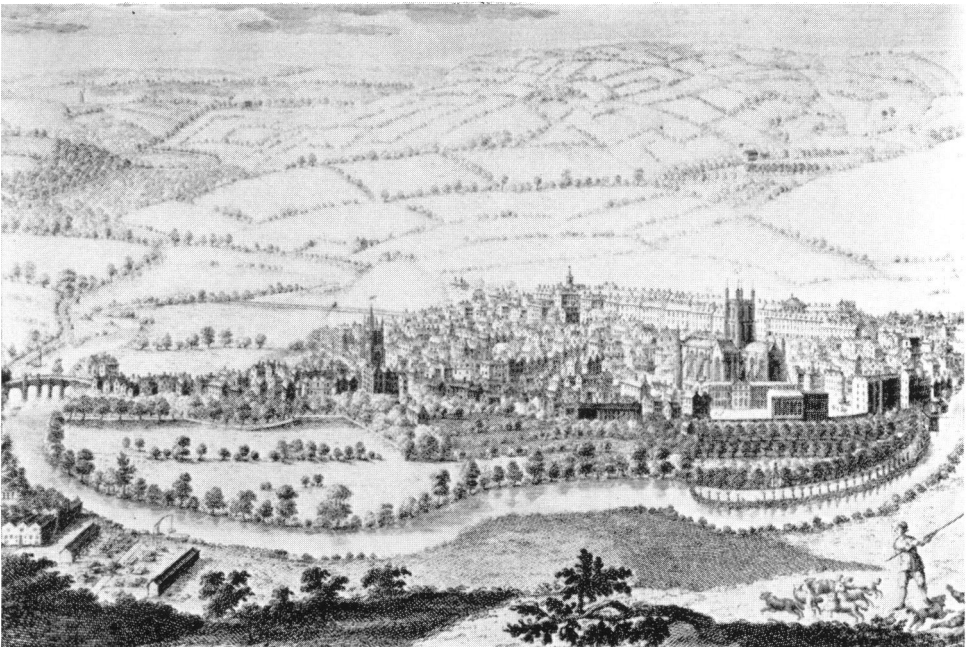


Fig. 2  
Bath in the early 18th century  
(By permission of the Trustees of the British Museum)

viscid Phelgm, Nausea and Vomiting, flatulent oppression, with pinching colic pains. Obstructions of the Liver, Gravel and Stones of the Gallbladder, preventing and curing the Jaundice' and 'Gravel and Stones of the Kidneys . . . .' It would clear and heal ulcers, 'take off Strangury and Incontinence of Urine' and in 'obstructions of the Menses' was 'no less effectual'. It was also useful in cachexias, in 'hard Drinking and high Living, attended with swelled legs, and an icteral Complexion . . .' and would 'restore the Constitution more than the Bath waters do'. It could bring 'the *Anomalous Gout* to be regular, when the Bath waters have failed' and externally it was effective in curing scrophulous ulcers among a host of other skin disorders. He concluded his account with seven case-histories. Thomas Harley, of Whitstable near Canterbury, for instance, was so crippled with rheumatism between 1736 and 1738 that he lost the power of one side completely. He tried the Bath waters without effect and finally, in the summer of 1739, took the Lincomb water for two months, at the end of which time he was so much relieved that he was able to walk home to Canterbury. A military gentleman, aged fifty or more, provides another example. He had made an extensive trial of the Bath waters in a vain attempt to cure recurrent abdominal pain and vomiting. He took the Lincomb water from March until July and went away from Bath perfectly recovered. 'I saw him some months afterwards,' wrote Hillary, 'when he was grown fat, jolly and hearty as ever, and I hear continues so.'

His general conclusions as to the value of the Lincomb water are as follows:

It seems a very natural Method to obtain these effects, to recommend the Use of cold Chalybeat Waters, after the warm ones have been sufficiently used; which method the German physicians judiciously practice in advising the Patients to drink the Geronster water at Spa, after a competent stay at Aix-la-Chapelle. What resemblance there is betwixt the Geronster water and the Lincomb has been importunately inquired into above. We shall therefore submit it to the Judicious, whether after a proper use of the warm Waters at Bath, this cold Chalybeat may not be of like Advantage in chonical Cases.

It is interesting to speculate how much these conclusions had been influenced by the distinguished nobleman to whom Dr. Hillary dedicated his book. Philip Dormer Stanhope, 4th Earl of Chesterfield, had been to both Aix-la-Chapelle and Geronster in 1741 and was well aware of the advice given by German physicians, for he had taken it himself.<sup>18</sup> It is also evident that the earl, a frequent visitor at Bath, had tried the Lincomb water, for in his dedication Hillary states that his book 'cannot be more properly addressed to anyone, than to a Patron, who has experienced its virtues, and seen its good Effects in some remarkable cases'. Such patronage must have enhanced the reputation of Hillary's spa.

He no doubt did well during the next few years. In 1744, John Fothergill, fellow dalesman and Quaker, Hillary's junior by fifteen years, now in the early years of his practice in London, visited Bath to see his ailing father, friend and neighbour of the Hillary family in Wensleydale. He advised him to make a trial of the Lincomb water. 'Dr. Hillary', he wrote to a colleague in Staffordshire, 'was well; he has pretty good business.' But Bath was anathema to the Quaker Fothergills. 'It's a place,' Dr. John went on, 'that I should choose to

reside in the last of all others. The people are accustomed to behave well to everybody when present, but more than that they don't seem to think is expected or necessary.<sup>19</sup> His father, a famous Quaker preacher, thought Bath 'a miserable poor place' where 'the enemy of Mankind had attempted in various ways to draw attention off from their deepest Interest, by all sorts of temptations, but had lamentably succeeded in that place. Religion of any kind seems to be banished from thence with as much solicitude as Judaism or heresy from Portugal or Spain.'<sup>20</sup>

The environment of Bath must have been alien to William Hillary as a member of the Society of Friends. But during the next two years there were developments which made the city even more uncongenial to him and which led to his leaving Bath. There had been a hint of trouble ahead in the dedication of his book on the Lincomb Spa Water. It had been his aim 'To rescue this medical water from Neglect and Obscurity and to render it more extensively useful', a laudable intention. Nevertheless it clearly represented a possible threat to other physicians in the neighbourhood whose livelihood depended, as was inevitable, on the waters of Bath. He had gone on: 'If my Endeavours are favoured with the Approbation of his Lordship . . . the partial Censure of those *who are interested in opposing them*,\* will have less weight with the benevolent.' This sentence suggests that he had enemies in 1742. And by the summer of 1746, for reasons which remain uncertain, he was making plans to leave Bath. His dilemma is clearly stated by his friend Dr. John Fothergill, writing from London on 11 September 1746 to his elder brother Alexander Fothergill at Carr End in Wensleydale.<sup>21</sup> The letter was no doubt shown to Isaac Hillary, living with his sisters at nearby Burtersett.

Dear Bro<sup>r</sup>

I met with thy kind of letter at my return from Scarbro' relating to Dr. Hillary's intended voyage, and now sit down to acquaint thee what I know of it. As S. Bevan did not write to him I had no occasion to say much, and indeed I could not, till I knew from the Dr. himself his principal reasons. He set out from hence to Bath on 2nd day last. During his stay in town he conferred several times with S. Bevan and several persons of note who mostly discouraged him from going thither, so that all thoughts of that place have been laid aside. Whilst he was here, news arrived of the Death of the only eminent Physician at Barbados: I procured him an interview with a person who gave him an exact account of the affairs of that Island, he likewise spoke with several others who jointly recommended the place as much preferable to Jamaica. His relations I doubt not will be averse to his leaving England at any rate, but as his situation at Bath is not the most agreeable nor the prospect very pleasing and at the same time one half of life may perhaps be over whilst he sees himself unfortunately stript of what might have rendered the remaining part pleasant, can one avoid listening to any proposals that may tend to remove any inconveniencys. I was always averse to Jamaica: At Barbados there are several meetings, the Island pleasant and healthy; the people much more humane and polite than any where else with a prospect of good employ: I have been far from urging him to go to either, yet was I in the like situation, I own I should be strongly drawn to this last place: and if he should apply to his relations for their consent, I think they should not too positively refuse him. The galling situation he is in at present, I see renders life a burthen to him, but this betwixt ourselves.

It is clear from this letter that some remarkable circumstance had radically affected William Hillary's position in Bath. Had jealous colleagues succeeded

\* Author's italics.

### *William Hillary*

in ousting him? Or had the spring dried up? Certainly his livelihood was jeopardized and he had to seek alternative employment. He was forty-nine years old, unmarried, and so had no ties to limit his choice. Jamaica was evidently his first thought. It was fortunate that he was dissuaded, for had he gone there he would never have seen a case of tropical sprue, a condition which for mysterious reasons has never been described on that island. For a Friend, Barbados was a better choice. John Fothergill had good reason to recommend it. His father, the preacher whom William Hillary had treated at Lincomb in 1744, had made religious visits there in 1723–4 and 1737–8 and had related his experiences in letters to his son.\* There were many Friends and five different Meetings on the Island.

By November 1746, Dr. Hillary's mind was made up. On the 3rd of that month, he applied to his Monthly Meeting in Bath for the Certificate customarily taken by a Quaker when he moved to a new place. He asked for a 'Certificate of his removal to Barbados'. On the 9th, at a special meeting called at Bath for the purpose, 'John Corbyn and Toby Walker there reported that Dr. Wm. Hillary appeared clear on ye account of Marriage and of an orderly Conversation in consequence thereof have drawn and brought a Certificate for his removal which was then signed by many Friends.'†

He must have travelled to Barbados in the spring or early summer of 1747. No doubt he was disappointed that Bath had failed to realize his hopes. In fact, it was the most important step in his life. Had he stayed in Bath, dosing the chronic sick with the waters, he would perhaps have made a fortune but he would have made little contribution to the medicine of his day. Whilst in fashionable Bath, Hillary had given up his practice, started in Ripon, of observing the changes in the weather and the related epidemic diseases. Working entirely on his own in Barbados, he would take up this practice again and obtain data 'founded upon observations and real Facts' which would be of lasting value.

The West Indian island of Barbados lies farther out into the Atlantic than any of the islands of the Leeward Group, directly in the path of the prevailing north-west Trade Winds. Barbados was entirely uninhabited at the beginning of the seventeenth century. In 1624, John Powell, returning home from Brazil, had landed there. He was struck by the beauty and fertility of the place and took possession in the name of King James. Returned to England, he succeeded in persuading Sir William Courteen, a London merchant with Dutch connexions, to back a settlement of the island. By 1631 the population numbered around 4,000 persons. At first, attempts were made to grow tobacco and cotton, but the quality of the tobacco was too poor to compete successfully on the London market and there was too little available land to lay out the extensive plantations that cotton would have required. It was the Dutch merchants who

\* Letters written from Barbados by John Fothergill, snr., to his son are published in *An Account of the Life and Travels in the Work of The Ministry of John Fothergill*, London, Luke Hinde, 1753, p. 290.

† *Records of North Somerset Monthly Meeting, 1741–1772*, pp. 105, 106. Library of Society of Friends, London.

encouraged the West Indians to grow sugar and in 1637 the first canes were brought from Brazil. By 1640, the population of the island had risen to the remarkable figure of more than 30,000, but at that time, before sugar production had seriously got under way, there were only a few hundred negroes. To grow sugar profitably, it was necessary to have some form of cheap labour and this led to the importation of armies of negro slaves, bought on the coast of West Africa in increasing numbers. When Hillary reached Barbados, the island was entirely covered with sugar plantations, each with its quota of slaves. The negro population was more than 50,000, the whites between 10,000 and 15,000. The years 1748 to 1756 were the golden age for the sugar plantations. Prices remained steady and fairly high and both production and demand were increasing all the time.<sup>22</sup>

Ann Austin and Mary Fisher, the first Quakers on the island, had landed there in 1655. They were followed soon after by Henry Fell and in 1671 George Fox himself paid a visit.\* By 1747, when Hillary presented his Certificate in Bridgetown, there were five Meetings. His own Meeting was in Tudor Street, Bridgetown.<sup>23</sup> Dr. Hillary seems to have taken an active part in the affairs of Friends in Barbados. In the summer of 1748 he rode up the coast road, the clear blue sea sparkling in the sunshine beside him, to attend the Quarterly Meeting near Speightstown. His signature, in a flourishing but easily legible hand, appears on the Epistle to the Friends and Brethren of the Yearly Meeting in London, sent from there in June 1748. But Friends at that time had slipped from the ways of their forefathers, a fact deplored in a report of the Quarterly Meeting:

It must be lamented that a remission even in profession is so observable here among many that are joined in Society with us, which the sensible justly consider as a declension in degree from the Evangelical Foundation and Power of Godliness. This hath bound the hearts of the sincere under an humble and fervent concern on their accounts, not without hopes what good thing remains may yet be strengthened, and that a just regard may at length prevail with them for the prosperity of truth in themselves and others.†

It was in fact a period of decline of the Society of Friends in Barbados. By 1760 the Meetings for discipline were no longer being held and succeeding years witnessed a progressive loss of the Society's properties.‡

As a physician at Barbados, Hillary would find himself consulted by planters and their families, by military personnel stationed on the island, and no doubt also by seafaring men whose vessels called at Bridgetown. He would see negro slaves on the plantations and perhaps witness the unloading of this unhappy human cargo from the slave ships newly arrived from West Africa. These ships made a triangular voyage—first to the Slave Coast with goods, across from there to the West Indies laden with slaves, then the final leg back to England with a cargo of sugar for the London market.<sup>22</sup>

Nothing is known of Hillary's day-to-day work during his early years in Bridgetown. But one visitor to Barbados has left an account of a professional

\* Friends in Barbadoes, *The Friend*, 1887, 60, 178.

† This epistle is preserved at the Library of the Society of Friends, London. (*Portfolio* 28/135.)

‡ 'The Decline of Friends in Barbadoes', *The Friend*, 1887, 71, 275.

## William Hillary

visit from Dr. Hillary in 1751. The writer was a young Virginian, aged nineteen years, who had brought his elder brother to Barbados for his health. The elder brother had developed ominous signs of consumption and had been ordered to spend the winter in a warmer climate than Virginia. They arrived in Bridgetown on 3 November, where they met Major Clarke, commander of James Fort and of the British Forces in the Windward Island. The writer recorded in his diary for 5 November 1751:

Early this morning came Dr. Hilary, an eminent physician recommended by Major Clarke, to pass his opinion on my brother's disorder, which he did in a favourable light, giving great assurance, that it was not so fixed but that a cure might be effectually made. In the cool of the evening we rode out accompanied by Mr. Carter to seek lodgings in the country, as the Doctor advised, and were perfectly enraptured with the beautiful prospects, which every side presented to our view—the fields of cane, corn, fruit trees, all in a delightful green.<sup>24</sup>

The patient referred to in this passage was none other than Lawrence Washington, of Mount Vernon in Virginia, and the young diarist was his step-brother, George Washington, inheritor of Mount Vernon, Commander of the Armies of the American Colonies in the War of Independence, first President of the United States of America. Dr. Hillary's favourable prognosis is at first difficult to reconcile with his patient's subsequent progress. Lawrence spent three months in Barbados, then went to Bermuda. He arrived home in Virginia in the following June, a shadow of his former self, and died on the 24 July 1752. But the modern physician would approve Hillary's cheerful approach. He must have been familiar with pulmonary tuberculosis, must have himself known what the prognosis might be. Yet no physician will readily leave his patient without hope, whose therapeutic effects are mysteriously effective, and there is therefore much to commend in Hillary's encouragement.

The Washington brothers stayed in Barbados with Captain Crofton at Fort James. Here, George fell ill with smallpox and from the 17 November until 12 December was under the care of a Dr. Lanahan. He does not record whether Hillary, whose book on the smallpox would make him an expert on this disease, was called in. The attack was fortunately mild and George Washington came through relatively unscathed, having achieved an immunity to the disease which was no doubt valuable in later years.

William Hillary's next book had the somewhat heavy title: *Observations on the Changes of the Air and the Concomitant Epidemical Diseases in the Island of Barbados; to which is added a Treatise on the putrid Biliious Fever, commonly called the Yellow Fever; and such other Diseases as are indiginous or endemical, in the West India Islands or in the Torrid Zone* (London, C. Hitch and L. Hawes). This was first published in London in 1759, the same year as his return.\* It is disappointingly lacking in autobiographical detail and tells little of his life in Bridgetown. He records an unfortunate accident to his barometer which prevented him starting his 'Observations on the Changes of the Air' until 1752. He used Fahrenheit's mercurial thermometer, a barometer and a hygrometer, and all his observations were made at Bridgetown. A narrative account follows of the weather and the

\* A second edition was published in London in 1766.

recurrent epidemics of fever, throat infections, skin diseases, and diarrhoea that he encountered. The preface and introduction contain two other passages which are worth quoting. He cannot resist a few words of advice to some of his professional colleagues.

For those who neither read, nor yet know how to reason on the Causes or their manner of Production of Diseases, and yet will boldly practice by rote, and prescribe by guess at a Venture, though the Life of the Patient depends on the right or wrong method of prescribing; I must seriously advise them at least to peruse the sixth Commandment.

He was equally forthright in condemning local sartorial fashions. 'Fashion and Custom', he wrote, 'are two prevailing Things, which enslave the greatest Part of Mankind, though often both contrary to Reason and Conveniency, and particularly in our Dress.' For the hot climate of the West Indies, he advised a 'thin loose gown or Banjan', the dress of the Mandarins, immensely more comfortable than 'a thick rich Coat and Waistcoat, daubed and loaded with Gold' under which he had seen men melting, preferring the 'Character of a Pop' to that of a 'Man of Sense and Honour'.

It is in the second half of the book that he described 'Such Diseases as are most frequent in the . . . West India Islands.' He started with a good though not original account of *Yellow Fever*. It was on account of the description of this disease that Dr. Hillary's book was republished in Philadelphia in 1811 by Benjamin Rush. Rush followed Hillary's method of treating the disease<sup>25</sup> and agreed with his view that the yellow fever could be taken more than once.<sup>26</sup> He found the *Dry Gripes*, the abdominal colic of lead poisoning, common in the West Indies, and gave a clear description of the neuritis which may complicate this condition. *Dysenteries* were so frequent that he considered diseases of the intestines to be the commonest disorders in Barbados. The *Opisthotonus* and *Tetany* were much commoner than in England. He did not know what caused tetanus but emphasized the difficulty of conceiving 'how such a small Puncture or Wound, and such a trifling cause as a small Puncture with a Pin, a small bone of a Fish, or a Nail, or a small slight cut with a Sharp Stone, but little more than Skin deep, in such remote Parts of the Body, should produce such violent Symptoms, and so fatal a Disease'. Other diseases described were *Rabies Canina*, *Yaws*, *Nyctalopia* and *Leprosy*. A hint of homesickness is included in his description of this last: 'O the happy Climate of England, which is totally a stranger to this and some other miserable Diseases.'

He also made some interesting observations on the pathology of *Elephantiasis*, a common condition in those parts. With Mr. Hickes, an 'ingenious Surgeon in the Navy', he had the opportunity of dissecting an immensely swollen leg affected by this disease, which had been amputated. They discovered that the muscles and bones of the leg were entirely healthy and that the morbid matter involved only the subcutaneous fatty tissue. Their conclusion that this matter was produced by a fevered condition involving the glands and tissues of the leg was not far wide of the mark.

It is Hillary's description of tropical sprue, given in this book, that has earned him an assured place in medical history. Tropical sprue is a form of intestinal

malabsorption, associated with nutritional deficiencies, that has a very curious and striking geographical distribution. It occurs all over the Far East. Physicians in the Indian Services have repeatedly encountered it. Manson saw it in China,<sup>27</sup> Bahr in Ceylon.<sup>28</sup> But no certain case has hitherto been described in Africa and although occurring in Barbados and Puerto Rico, it has never been recorded in the neighbouring island of Jamaica.<sup>29</sup> Where it occurs, it is usually endemic and liable to sporadic epidemics. Hillary was not in any position to define its geographical distribution, although this is implied in his statement that he had never seen it in England. But he did note its epidemic nature. 'After I came there in 1747,' he wrote, 'I did but see one Person who had it, in the first four Years of my residing there; and three more in the next three Years: But within the four last Years past, it is become so frequent that I have seen some Scores of Patients labouring under it. . . .' His description of the disease, which he called the *Aphthoeides Chronica*, follows:

The patient who labours under this Disease, usually first complains of an uneasy Sensation, or slight burning Heart about the Cardia, or upper Mouth of the Stomach; which comes slowly on, and gradually increases, and rises up in the Oesophagus into the Mouth, without any Fever, or the least feverish Heat, or Much Pain attending it; most commonly without any observable Intemperance or Irregularity of living, or without any surfeit, taking Cold, or any sort of Fever or other Disorder, which it can be attributed to, preceding it, or any manifest or immediate Cause to which it can be ascribed.

Soon after this burning Heat, little small Pustulae, or Pimples, filled with a clear acrid Lymph, no bigger than a Pin's Head, begin to rise; generally first on the End and Sides of the Tongue, which gradually increase in Number, not in Magnitude, and slowly spread under the Tongue, and sometime to the Palate and Roof of the Mouth, and the inside of the Lips; and soon after this the skin which covers those Pustulae, slips off, and the Tongue looks red and a little inflamed, though not swelled, yet is almost raw like a Piece of raw Flesh, and is so tender and sore, that the Patient can eat no Food but what is soft and smooth, nor drink anything that is vinous or the least spirituous, or the least pungent, without acute pain; So that some suffer much from the want of proper Food. . . .

In this State they continue several Days, or Weeks, and sometimes for Months, sometimes a little better, then worse again; and after a considerable time, sometimes longer, and sometimes shorter, the Pustulae will disappear and the Mouth grow well, without any Medicines or Applications, or any manifest Cause, and continue so for several Days or Weeks. . . .

This generally continues but a little time before a Diarrhoea comes on, and continues a longer or shorter time in different Patients, and sometimes for a longer or shorter time in the same Person, and in some it continues for many Weeks; and in all it greatly wastes their Flesh and Strength, and sinks their Spirits very much. The Diarrhoea after continueing a longer or shorter Time, sometimes stops without taking any Medicines, or doing anything to stay it, and the Patient thinks himself better for a short Time, and sometimes for a longer time; but in general the acrid Humour soon returns to the Mouth again, with all the same Symptoms, but somewhat increased or aggravated; and after some stay there it removes from thence to the Stomach and Bowels again. . . .

The Patients are all along without any Fever or feverish Heat, and their Pulse is all this Time rather smaller, lower, slower and more languid than it was when they were in full Health; and their Body Countenance rather paler . . . than when they were well. . . .

And when the Humour falls upon the Intestines, it produces a Diarrhoea with a sense of Heat, and sometimes a griping, (tho' the last not often) and sometimes with hot stools and a Tenesmus; so that most of the nutritious Juices run off that way, which greatly wastes and sinks the Patient. These Circumstances continueing, and the Disease frequently changing from place to place, almost continually deprives the Sick of their proper Nourishment, whence a true atrophy is



produced, which at the last, either sinks the Patient or brings on a *Marasmus*, which soon ends in Death.

In this excellent description, Hillary emphasized the cardinal clinical features of tropical sprue—the chronic nature of the disease, subject to relapse and remissions, the troublesome glossitis, now known to be due to folic acid deficiency, the recurrent diarrhoea, which as he states, gradually wastes the patient, depriving him of his nourishment, leading to anaemia, progressive wasting and death.

Hillary has not been credited by some writers<sup>4, 5</sup> with the first description of tropical sprue. This is because until recent years the tropical form of sprue has been confused with its non-tropical counterparts, coeliac disease and idiopathic steatorrhoea, which are entirely different disorders. Descriptions which may possibly be of the latter condition were published in Europe in the seventeenth century,<sup>30</sup> but such descriptions are ambiguous and uncertain and bear no relation to the purely tropical condition that Hillary saw in Barbados. Hillary's description is authoritative and complete. He had clearly watched and recorded at the bedside of many of his patients, and he no doubt remained as puzzled as to aetiology as the physician of today. The first edition of Hillary's book on the *Diseases of Barbados* is rare today and the second edition, published in 1766, is often quoted as the date of his description,<sup>3, 6</sup> an unfortunate error since by then he had been dead for three years.

Hillary returned to England after a stay of twelve years in Barbados, in 1759. It was the most remarkable year of the Seven Years War. William Pitt's military strategy had gained great victories for England in every corner of the globe. In America there were triumphs at Niagara, Ticerondaga and Crown Point. Madras was taken, the battle of Minden won. And war crept close to Barbados too. In the spring of 1759, a British force attacked and took the French island of Guadaloupe. Perhaps Hillary decided discretion was the better part of valour. He was now over sixty and perhaps the climate taxed his increasing years. He seems also to have been financially successful. A contemporary stated that he had made £6,000 during his twelve years in the island.<sup>8</sup> Whatever the cause, by the late autumn of 1759 he was back in London, probably in time to hear the firing of the Park and Tower guns, to see the flags displayed from steeples everywhere and the greatest illuminations ever known, with which on 12 October the City of London celebrated the fall of Quebec.

Dr. Hillary lived for the remaining years of his life in London, apparently at first in East Street, off Red Lion Square in Bloomsbury. Although now in retirement, he was by no means idle. He must at once have been busy preparing his *Diseases of Barbados* for the press. Soon afterwards he was occupied with another literary venture. This was entitled *The Nature, Properties and Laws of Motion of Fire—discovered and demonstrated by Observations and Experiments* (London, L. Davis and C. Reymers). His preface, dated East Street, 14 November 1759, describes how he had first made attempts 'to discover the subtle and mysterious nature of fire by Experiments . . . above twenty years since; but the great difficulty of carefully examining such an intractable being, and sometimes the want

of proper instruments for that purpose, and more frequently the avocation of my profession, often put a stop to my proceedings therein, and several times obliged me to lay them aside for several years'. It was addressed to the Earl of Macclesfield, President, and to the Council and Fellows of the Royal Society of London, probably because he wished to bring himself to their notice. The book is interesting in indicating the curiosity, breadth of knowledge and erudition of an eighteenth-century physician. It contains no startling discoveries or observations. Fire is consistently confused with heat; but Hillary emphasizes its fundamental importance to living things. If there were no fire, he argues, to 'penetrate, pervade, rarify and expand all other bodies', there would be no fluids, hence no vegetable juices, no nutrition, no growth, no life itself. He again gives due credit to the scientific methods of his old teacher, Dr. Boerhaave, who 'wisely and judiciously pursued that excellent Method of investigating the causes of things by Experiments and Induction, recommended by the great Lord Verulam . . . and this is the Method by which Newton, Boyle, Locke and Boerhaave, and all other great Philosophers since his Lordship's time, have made discoveries. . . .'

Hillary remained throughout his life an enthusiastic protagonist of the scientific method and his idealism does not seem to have been dulled by increasing years. His last book, published in 1761, was in some ways his most ambitious and idealistic venture. *An Inquiry into the Means of improving Medical Knowledge, by examining all those Methods which have hindered or increased its improvement in all past ages* (London, C. Hitch and L. Hawes) was no less than an examination of the art and practice of medicine since the earliest times, with a view to determining what had either aided or hampered its progress. It is of particular interest to the medical historian, since it is in fact an eighteenth-century history of medicine, an account of medical practice through the ages that illustrates the very extensive knowledge and wide reading of the writer. His introduction again stresses the author's indebtedness to Boerhaave who, writes Hillary:

was blessed with great Penetration, a sane Judgement, and the strongest Memory; all of which he early applied with indefatigable Industry, to obtain a perfect knowledge of all the learned, and many of the modern Languages, and all the Sciences; an able Philosopher, the greatest Anatomist, Chemist, Botanist and the most eminent Physician of this, or any other Age.

No teacher of medicine could wish for a more handsome tribute.

His book starts at the very beginning of things with the Creation, and first takes the reader up to the time of Hippocrates. He then gives an account of the improvement of medicine after this period, describing the work of Celsus and Galen. He displays an astonishing knowledge of the work of the Arabians, in particular Mohammed ibn Zakariyya al-Razi (Rhazes), emphasizing how medicine flourished in Arabia during the dark ages in Europe. These ideas certainly reflect the teaching of Boerhaave.<sup>13</sup> He recognizes to the full the importance of the 'Restoration of Learning', and again pays his most ardent homage to

Francis Bacon, Lord Verulam, one of the greatest Genius' that any Age ever produced; and although he was not a Physician, but a Lawyer and a Philosopher, yet *he* first discovered and

taught Mankind the right way of Thinking, and the true method of discovering Truth, and obtaining true Knowledge and Certainty, both in Philosophy and in Physick, and all other Sciences. . . .

It was to this method of reasoning, for example, that William Harvey owed the demonstration of the circulation of the blood, and Boerhaave his success. Hillary's 'General Remarks on the Improvements and Hindrance of its Improvement' follow. They include an enthusiastic recognition of the significance of the *Vis medicatrix Naturae*, of which he would be well aware after a lifetime of practice. He disapproved of Galen and the long period during which acceptance of his ideas had hindered progress, and he was surprisingly critical of Aristotle. He quoted a number of specific errors made by practising physicians, for example the curious story of how the use of blisters on the head in a patient with gout had brought the disease to that site and led to death within thirty hours. It is difficult in some of these instances to follow the line of argument. His approval of the Hippocratic method of careful clinical observation of disease, which Boerhaave had so admired in Sydenham and which Hillary had himself practised in Barbados so successfully, again gave him the opportunity of a word of critical advice.

I am sensible that this Method of observing Disease in Nature, and strictly following and assisting her, [he wrote] may probably be objected to by some of the Faculty, especially by those who think it too tedious and laborious a thing, so strictly to observe Diseases and Nature, and too servile a thing to follow and assist Nature in that Manner; especially if they are used to hurry over their Patients, and are in a haste to grow rich. . . .

On the use of medicines likewise:

It is not our having a great Number of choice Prescriptions, or a great Variety of Formulae, however neat and elegant . . . that will make either the most able or the most successful Physician; but his truly Knowing the Disease, and what the Cause really is, and when and how he should assist Nature by administrating suitable Medicines, and when not. . . .

His objections to polypharmacy have a remarkably modern ring; and his words on those who haste to grow rich relate to one of the age-old problems of medical practice, as true today as when his book was written.

William Hillary died on 25 April 1763.\* He is described in the records of the Friends as 'of St. Dunstan in the West' and had been a member of the Peel Meeting, which met at St. John Street, Clerkenwell. He was buried on the 1st of May in the Friends' Burying Ground at Bunhill Fields. The cause of his death was stated to be 'Fever', and it may have come on him suddenly for he left no will. An administration was granted to his younger brother, Richard, 'one of the next of kin', but there is no record of what his 'goods, chattels and Credits' comprised.† Did his old friend John Fothergill, now at the height of his

\* *Middlesex Burials*, Library of Society of Friends, London. The entry reads: 'William Hillary, of St. Dunstan in the West aged about 63 years, 25/4 1763, of a fever.'

† The Administration is preserved at Somerset House and a copy is among the Hillary papers at the Society of Genealogists, London. It records: 'on the eleventh day [of May 1763] Admon, of the Goods Chattels and Credits of William Hillary, late of the parish of St. Dunstan in the West, London, a batchelor decd. was granted to Richard Hillary the natural and lawful Brother and one of the next of Kin of the said decd., he having been first sworn duly to administer'. No other details are given.

## William Hillary

fame as a London physician, attend him during his last illness? History has left no record of those last days, nor was his grave marked by a stone, for this was not the practice of the Quakers at that time. The *Gentleman's Magazine* of April 1763 merely recorded briefly the death of 'Dr. Hillary, well known for his many ingenious treatises on physic'.\*

These 'ingenious treatises' deserve the attention of all physicians who today seek to improve the practice of medicine by scientific methods. Hillary has a forthright style which is attractive to read. The clarity of his thinking, his careful bedside descriptions of disease, his condemnation of bigotry and preconceived ideas are refreshing reminders of the scientific renaissance that began to influence clinical medicine in Britain during the eighteenth century. The most impressive feature of his work is the whole-hearted enthusiasm of his belief in the value of a scientific approach to medicine. In an age when much remained mysterious and unknown, when ignorance was glossed over by 'Whymiscal Hypothesis' and 'Conceited Imagination', he believed that rationalism could replace empiricism, that mystery could be dispelled by science. 'It is by this Method of reasoning from Data, founded upon observations and real Facts, that the Healing Art must be improved and brought to a state of Perfection', he had written in 1735. Nearly thirty years later, the scientific idealism inculcated at Leyden by Boerhaave was in no way diminished.

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\* *Gentleman's Magazine*, 1763, 35, 202. The date of death is here given as 22 April, three days earlier than the date recorded by the Friends [see note p. 314].

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