THOMAS SYDENHAM (1624-1689)*

REFORMER OF CLINICAL MEDICINE

bу

KENNETH DEWHURST

It would be quite impossible to deal adequately with Sydenham's life and works within the confines of a lecture, and I would, therefore, like to concentrate on some aspects of his career which have, hitherto, escaped general notice. His early years against the background of the Civil War; his relations with his medical colleagues, and Sydenham's manuscript writings, rather than his readily available published works, are some of the biographical features which have been overlooked in the past.

Thomas Sydenham was born at Wynford Eagle Manor House, Dorset, in 1624, the son of William Sydenham and his wife Mary, the daughter of Sir John Jeffery. The Sydenhams originally came from Somerset, and he was thus descended on both sides from West Country squirearchy. It was a large family. There were three daughters and seven sons, two of whom died in infancy. Colonel William Sydenham, the eldest son, was influential during the Protectorate as Governor of Weymouth, a Member of Parliament, and later, one of Cromwell's Council of State. Two sons, Francis and John, were killed whilst serving as majors in the Parliamentary Army, and Richard, who also served during the war, became a Civil Servant under the Protectorate.

Thomas Sydenham probably went to Dorchester Grammar School; and in 1642¹ when he was eighteen years old, he entered Magdalen Hall, Oxford, whose principal was John Wilkinson, one of the leading Puritans in the University. Just as Sydenham began his studies the conflict between King and Parliament was reaching its final catastrophe, and on 22 August 1642, Charles I raised his standard at Nottingham. Sydenham had probably already returned to Dorset, so his total period of University residence could not have exceeded two months. His father and two elder brothers were already serving the Parliamentary cause; and during the next four years Thomas Sydenham came to manhood in the bitter clash of opinion and conscience which divided his fellow countrymen on the battlefields of Dorset.

The Civil War in Dorset was essentially a series of localized skirmishes and sieges: there were no pitched battles, and hence the campaign has been overlooked by general historians. The importance of the county depended on its geographical position between the Royalist strongholds of the South-west at Sherbourne and Corfe, and their headquarters at Oxford. And the coastal towns, with their useful harbours and proximity to France, were of vital importance in the Royalist communications with their continental allies. At first all went well for the Parliamentary cause. They occupied the coastal towns,

^{*} The Sydenham Lecture given before the Faculty of the History of Medicine and Pharmacy, Society of Apothecaries of London, on 22 November 1961.

fortified Dorchester, and in the Spring of 1643 captured Sherbourne and Portland. Only Corfe Castle held out, and whilst the Parliamentary Army was still trying to break through its fortifications, Prince Rupert captured Bristol, and immediately despatched a large force to relieve the hard-pressed Dorsetshire Royalists. Within weeks most of the county had been regained for the King, and only Poole and Lyme remained in Parliamentary hands. During the Royalist advance, Thomas Sydenham's father was captured and taken as a prisoner to Exeter.

The war now entered a raiding phase with both sides sallying forth from their bases to intercept supplies, threaten hostile strongholds, and occasionally to lay siege to fortified towns. The Sydenham family were always in the forefront of these engagements, and it would be no exaggeration to state that no other family in the county gave more distinguished service to the Parliamentary cause. They raided Wareham, Wimborne, Dorchester, and successfully defended Poole. In the summer of 1644 Lord Essex, the Parliamentary Commander, captured Weymouth and Melcombe Regis, and the Parliamentarians regained the advantage. Colonel William Sydenham was appointed Governor of Weymouth and Commander-in-Chief in Dorset; and his brother Francis was Commander of the Cavalry, in which Thomas served, probably as a Cornet of Horse.

In this year (1644) a tragic event embittered the whole family. Mrs. Sydenham was killed by the Royalists. The circumstances of her death are unknown, but she was probably killed during a Royalist reprisal raid on her home. One of her sons avenged her death in the autumn of that year when a Royalist force attempted to surprise Poole, but they were chased to Dorchester by Major Francis Sydenham. There the Royalists rallied, and Sydenham recognized Major Williams who had killed his mother, and in the words of a contemporary chronicler, 'spoke to his men that were next to him, to stick close to him; for, said he, "I will now avenge my mother's innocent blood", and so he made his way to Major Williams and slew him in the place, who fell dead under his horse's feet'.²

Occasionally the grim fighting was lightened by more subtle incidents which illustrate the religious differences between the two armies. The story is told of a Royalist doctor who was called to treat a captain in the Parliamentary army, suffering from dysentery. The Puritan officer had just vented his feelings by tearing up a common prayer book, the leaves of which the doctor caused to be boiled up in milk and administered to his patient. As this mixture wrought a rapid cure, the doctor then preached the evil of tearing up a book with such obvious medicinal properties. To a sceptic who inquired whether any other sort of printed paper would not have done just as well, the doctor replied: 'No, I put in the page for the visitation of the sick.'

In 1645 the three Sydenham brothers were in the heavily fortified port of Weymouth, when at midnight on 7 February, whilst the garrison was reposing under a false sense of security, two Royalist raiding parties gained possession of the key forts. Major Francis Sydenham was killed, and his brothers

narrowly escaped into Melcombe where all the Parliamentary forces now gathered, leaving Weymouth in Royalist hands. The bridge between the two towns was drawn up, and the meagre defences of Melcombe were rapidly strengthened. During the next week the Royalists ineffectively endeavoured to reduce Melcombe by bombardment; but the battle became a stalemate as both sides tried to build up overwhelming forces. By a strange coincidence Thomas Sydenham, destined to be the great reformer of clinical medicine, and Richard Wiseman, then surgeon to a Royalist regiment of Foot, and the foremost practical surgeon of the seventeenth century, unwittingly faced one another across the narrow strip of water which separates the two towns.

Colonel Sydenham was the first to take the initiative. He sent out a raiding party which completely routed a troop of cavalry, taking sixty prisoners, and suffering only one casualty, his brother Thomas, who was slightly wounded. Whilst Sydenham was having his wounds dressed in Melcombe, Wiseman was busily treating Royalist casualties in Weymouth. He mentions attending a soldier with severe haemorrhage from a gunshot wound in the heel; a maid shot through the forehead; and a soldier who 'by grazing of a canon shot, had the fore-part of his head carried off'. The latter survived for seventeen days, but eventually 'he fell into a Spasmus and dyed, howling like a dog, as most of those who have been so wounded'.³

After eighteen days of bitter fighting Colonel Sydenham seized an opportunity of regaining Weymouth when a small Royalist party were bringing in supplies. They were attacked by the Parliamentary cavalry which forced them to retire leaving their stores behind, whereupon a large body of infantry went to their support. It was then that Sydenham attacked and recaptured the Weymouth forts which dominated the town. During this counter-attack Richard Wiseman narrowly avoided capture. Two days before, he had successfully amputated the hand of an Irish soldier, and was dressing other wounded in a house 'almost under the Chappel Fort', when, he wrote: 4

I heard a woman cry, fly, fly, the Fort is taken. I turned aside a little amazed . . . and as I began to run, I heard one call, Chirurgeon, I turned back, and seeing a man hold up his stump and his hand, I thought it was the Irish-man, whom I had so lately dismembered; I returned and helpt him up, and we ran together, it was within half musquet shot of the enemies Fort, he out ran me quite.

Another amateur medical man, Sir Kenelm Digby, was hovering in the background at this time, as he had been sent from Oxford to Sherbourne with secret information on the Parliamentary dispositions.

With the recapture of Weymouth the Civil War in Dorset soon came to an end. In November 1645 Colonel Sydenham took his seat as Member of Parliament for Melcombe Regis; and soon after the surrender of Oxford, Thomas Sydenham resumed his interrupted studies. On the way to Oxford he visited his sick brother, then under the care of Dr. Thomas Coxe.

With his well-known kindness and condescension, Dr. Coxe asked me what pursuit I was prepared to make my profession [wrote Sydenham],⁵ since I was now returning to my studies,

which had been interrupted, and was also arrived at years of discretion. Upon this point my mind was unfixed, whilst I had not so much as dreamed of medicine. Stimulated, however, by the recommendation and encouragement of so high an authority, I prepared myself seriously for that pursuit.

Sydenham returned to his old college, Magdalen Hall, but in October, 1647 he transferred to Wadham. When the Puritan party gained control of the University large numbers of students had been prevented from taking their degrees by the ordinary course of residence, and the normal exercises in the schools. In order to satisfy their aspirations, and also to provide a sufficient number of graduates for vacant offices, a large number of degrees were conferred by 'actual creation'. The Acting Chancellor, the Earl of Pembroke, made lavish use of his right to confer degrees and Sydenham was one of the fortunate recipients. On 14 April 1648 he was created Bachelor of Medicine. A few months later he was appointed to a Fellowship at All Souls, where he became Senior Bursar. Amongst his college contemporaries were Christopher Wren and Dr. Thomas Millington, who mentioned that after four years' absence from the University, Sydenham's Latin was very rusty, and that he set about reviving it by constantly reading Cicero.

Sydenham's medical studies had been most meagre. He had qualified within a year of entering the University, and it is doubtful whether he showed much academic diligence during his later Oxford residence. He would find little of interest in the antiquated curriculum. Many of the teachers were as undistinguished as the Professor of Medicine, Dr. Thomas Clayton, who was 'possest of a timorous and effeminate humour, and could never endure the sight of a mangled or bloody body'. Sydenham did not associate himself with the brilliant experimentalists who later formed the nucleus of the Royal Society, and it is doubtful whether he attended many disputations, dissections or botanical excursions conducted by the orthodox teachers. His main interest was in clinical medicine, but Oxford could only offer a theoretical course consisting largely of readings from Hippocrates and Galen. His opinion of Oxford is expressed in the diary of a contemporary medical student, the Reverend John Ward, who later became Vicar of Stratford-on-Avon: 'Physick, says Sydenham, is not to bee learned by going to Universities, but hee is for taking apprentices; and says one had as good send a man to Oxford to learn shoemaking as practising physick.'8 Sydenham did, however, have a chance to learn how to resurrect the dead, when a woman, Anne Greene, was hanged in the Parks for murder, by the executioner Jack Ketch. She was declared dead by the Sheriff, and her body was duly delivered to the Anatomy School. There she was revived by Dr. William Petty, and the episode was celebrated in the following undergraduate doggerel:

> Anne Green was a slippery queen. In vain did the jury detect her— She cheated Jack Ketch and then the vile wretch 'Scap'd the knife of the learned dissector.

During his University residence Sydenham was still in the militia, and on 21 April 1651 he was commissioned as a Captain of Horse in the First Horse Regiment of 3,000, commanded by Colonel Rich. Troubles in Ireland had kept a large number of troops deployed there, and in June 1650, Cromwell led another army to the Highlands of Scotland to oppose Prince Charles. It was feared that absence of troops would be the signal for a Royalist insurrection in England, so the militia was called out. Shortly after Sydenham joined his regiment in London he had a remarkable escape from death. A drunken trooper burst into his lodgings, and from close range fired a pistol into his chest. Fortunately the soldier placed his left hand on Sydenham's breast, in the direct line of fire, so that the bullet shattered his hand, and Sydenham escaped unscathed. 10

He had now embarked on a totally different campaign from the territorial skirmishes of Dorset. Sydenham's regiment was held as a mobile strategic reserve whilst Cromwell vainly tried to bring the Scots to a decisive battle in the Highlands. There was a clash at Stirling in May 1651, when Major John Sydenham was killed, but the main Scottish army slipped past Cromwell's forces and headed for England. Sydenham's unit was then ordered to 'embody upon the borders', and shadow the enemy until Cromwell's main troops could catch up with them. He mentioned in his writings that he treated an outbreak of dysentery in Scotland, so presumably Sydenham physicked his men as well as leading them into action. His regiment first clashed with the enemy at Warrington Bridge, where the Scots crossed the Ribble, and in an effort to delay their advance Sydenham's troop charged the King's Life Guards on three occasions. But the march southward continued, until Charles came to Worcester which he heavily fortified. Sydenham was almost certainly present at the Battle of Worcester on 7 September 1651—a battle which Cromwell, old campaigner though he was, described as a 'stiff business'. After fierce infantry hand-to-hand fighting, Major-General Harrison's Horse, in which Sydenham's regiment had been incorporated, charged the retreating enemy, taking over two thousand prisoners. It was probably at this battle that Sydenham was wounded, as many years later, when telling Andrew Brown of his many narrow escapes from death, he mentioned that he had once been 'left on the field among the dead', 11 and elsewhere he wrote that his service with the Parliamentary army had resulted in 'the loss of much blood and (he) was thereby much disabled'.¹²

This was Sydenham's last campaign; but for the next two years he waged a constant struggle for compensation with various Parliamentary committees, and was eventually promised land in Ireland. As this never materialized he finally petitioned Cromwell and on 23 April 1654 received £600 from the Revenue Committee who were directed to give him 'such employment as he is most capable of'. This award enabled him in 1655 to resign his fellowship. The same year he married Mary Gee at Wynford Eagle, and soon afterwards settled in practice in King Street, Westminster. He was thirty-one years old. He had chosen a favourable position, near the Protector's court at Whitehall, the district where most of the Government officials lived, whilst behind his house were the swampy marshes of St. James's Park which periodically provided him

with a steady influx of malarious patients. But Sydenham's plans were still unsettled. He probably practised somewhat fitfully, as he still had hopes of receiving Government patronage. In 1659 he was a Parliamentary candidate for the 'family' seat of Melcombe Regis in the first Parliament of Richard Cromwell. He was defeated at the polls, but a few months later, was appointed to the Government office of Comptroller of the Pipe, which was not a urological appointment, but a department of the Exchequer concerned with the registration of Crown leases. Within a year, however, the Restoration of Charles II swept him from office.

It has been generally accepted that just before the Restoration, Sydenham went to Montpellier, where he studied under Dr. Charles Barbeyrac, a wellknown Protestant physician. This story rests entirely on the hearsay evidence of M. Dessault. 16 an eighteenth-century French surgeon, who stated that one of his friends knew Sydenham at Montpellier. But did Sydenham ever visit France? He had just been appointed to a lucrative Government post at home, and would be unlikely to leave so soon afterwards. He never names Barbeyrac in any of his writings, nor mentions ever setting foot in France. He describes his movements as follows: 'After a few years spent in the arena of the University. I returned to London for the practice of medicine.'17 Some years later John Locke, physician and philosopher, spent three and a half years in France, and lived for eighteen months in Montpellier, as a close friend of Dr. Barbeyrac. During this period Locke corresponded every month with Dr. John Mapletoft who sent him news of Sydenham. In none of these letters, nor in two other letters actually written by Sydenham to Locke during the latter's residence abroad, does Sydenham send his regards to Barbeyrac, or even mention his name. We also have proof that Sydenham did not understand French. In a letter from Dr. David Thomas to Locke, thanking him for sending a French abridgement of his famous Essay Concerning Human Understanding, Thomas writes:18 'You cannot expect much concerning your booke from Dr. Sidenham or Goodall who neither understand the language it is writt in.' Sydenham naturally expected all foreigners to learn English, and he regarded addressing a letter in French as a great imposition. 'I made your complement to Dr. Sydenham who would return it under his hand,' wrote Mapletoft to Locke, 19 'but he cannot prevayl with himselfe to write "A monsieur Monsieur" which he rayles at as a very impertinent way of adres.' Is it really likely that Sydenham, with such a strong streak of chauvinism and deeply ingrained puritanism, would ever leave his family and practice to visit Catholic despotic France? In all probability he did not leave England, and it was Barbeyrac who was influenced by Sydenham's writings. Indeed, one of Locke's friends writes that Barbeyrac 'commends extreamely by Dr. Sydenham's book'.20

It is more likely that Sydenham remained in England during the last days of the Commonwealth; and a year later, as the only survivor of this family of five brothers, he began to steer a lone course through the shoals of Restoration England. He now began to practise in earnest. In 1663 he became a Licentiate of the College of Physicians. A year later he moved to Pall Mall next to the

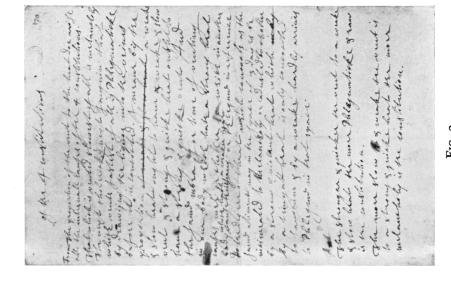
'Pestle and Mortar', the shop of his apothecary, Daniel Malthaus. Between 1661 and 1664 he kept detailed notes on the London epidemics which he later summarized in his Method of Treating Fevers (1666). The Great Plague of 1665 probably gave him an opportunity of writing this small book on fevers. He left London when the epidemic 'reached his own door' in June, and Westminster was almost deserted. Sydenham has often been reproached for leaving the capital. He certainly never lacked courage, but it would have been foolhardy to have remained with a wife and young family in a plague-ridden area which was, in any case, depopulated. He went therefore to Dorset, where he became interested in the remarkable cures performed by Valentine Greatricks, an unqualified Irishman, who treated his patients by stroking them. Sydenham went to investigate these claims, 'with as much prejudice against it as any man', but after hearing many independent reports of the remarkable cures he informed Boyle that he had seen and heard enough 'to overwhelm us with clear evidence of such wonders'.²¹

On his return to London Sydenham continued keeping detailed notes of diseases which were the basis of his Medical Observations (1676), and of subsequent tracts on the use of Peruvian bark, the treatment of rheumatism, venereal disease, hysteria, gout, dropsy, and finally, of a treatise on a 'new fever' which was probably typhoid. Every one of his publications is truly based on personal observations, which he carried out meticulously even whilst he himself was constantly plagued with illness. He began to suffer from gout before he was thirty, and seven years later he developed the first symptoms of renal calculus. It is remarkable that he survived until the age of sixty-five. In order to mitigate his symptoms, Sydenham adopted a fixed routine. In the morning he drank tea, then saw his patients, and went for a ride in his coach until noon. He ate moderately. After lunch he drank a pint of Canary wine, and went for another coach drive of two or three miles, usually to Acton. He was a great believer in fresh air. At supper he had a glass of beer and another in bed. He felt no discomfort when driving over a smooth surface, but when riding over cobbled stones he usually drank a glass of small beer before leaving, and another in the coach, as he believed that plenty of fluids prevented haematuria. These physical afflictions were offset, to some extent, by a happy family life. He had three sons. William, Henry and James: the eldest son went to Pembroke College, Cambridge, where his father took his M.D. degree in 1676. But William left there without taking a degree, and later qualified in Scotland. Henry was a merchant in Spain at the time of his father's death, and James was still a minor, but eventually obtained a commission in the army. The family circle was completed by Sydenham's mother-in-law, together with the occasional medical apprentice.

The last thirty years of Sydenham's life, though uneventful, were his most productive and important years. His obvious integrity and single-minded devotion to medicine attracted a number of loyal friends who assisted him in his work, and in the development of his ideas. The earliest and most influential was the Honorable Robert Boyle, to whom he dedicated his book on fevers. Although their main interests were somewhat divergent, Boyle and Sydenham

had two things in common: a deep religious sense and a devotion to Baconian methods in their chosen spheres. Amongst his younger friends was John Locke, the philosopher, who had recently been appointed physician to Lord Shaftesbury. When he made Sydenham's acquaintance around 1667, Locke was a minor virtuoso full of iatrochemical notions. He had previously assisted Richard Lower in physiological experiments, and had studied botany and chemistry, but his knowledge of clinical medicine was almost entirely theoretical. Friendship with Sydenham soon completely changed the direction of Locke's medical interests, and henceforth, he deserted the chemical laboratory for the bedside, which was the only place in Sydenham's opinion where clinical skill could be acquired. Locke served an apprenticeship with Sydenham, and (as Boyle had before him) accompanied him on visits to patients. He prefixed a Latin poem in praise of Sydenham's methods to the second edition of his book on fevers (1668).

Locke and Sydenham were happily associated as pupil and master for a few years, although their collaboration has often been misinterpreted to Sydenham's disadvantage. At this stage in his career, Locke had very little to offer Sydenham other than his support and secretarial ability. In 1669 Sydenham planned to write a general book on The Art of Medicine, wherein he proposed to deal with the contribution of experience, clinical method, botany, chemistry and anatomy to the physician's main task of curing disease, and he proposed to show how some of these subjects had fallen short of this objective. Sydenham really intended to demonstrate that clinical experience was of far more importance to the practising physician than a knowledge of the basic sciences. Unfortunately, this work was never completed, but two fragments²² are still extant; as these are both in Locke's hand (apart from one sentence), they have hitherto been regarded as his work. In fact the late Dr. A. G. Gibson expanded one of these manuscripts into a book on Locke. 23 But an entry in John Ward's diary suggests that Sydenham was the author, Locke's role being probably only secretarial. 'Dr. Sydenham is writing a book which will bring physitians about his ears, to decrie the usefulness of natural philosophie, to maintaine the necessitie of knowledg in anatomie in subordination to physick.'24 Shortly afterwards Sydenham planned to write a separate treatise on smallpox, and again Locke did some of the secretarial work for him. The preface and the dedication to the Earl of Shaftesbury (in Locke's handwriting) are preserved in the Public Record Office, and a copy of the rest of the essay is to be found in one of Locke's notebooks, at the end of which he wrote: 'Written by the great Genius of Physick Dr. Sydenham in July 1669.'25 The preface and dedication were never used, but Sydenham incorporated these clinical notes into his later work. There are other rough drafts in Locke's handwriting of Sydenham's views on dysentery, intercurrent and intermittent fevers and pleurisy, which were later used in Sydenham's Medical Observations. On account of these fragments in Locke's handwriting, which are preserved in the Lovelace Collection at the Bodleian, 26 it has been argued that Locke had a great influence on Sydenham. I believe that it was the other way round. Sydenham's constant advocacy of accurate clinical



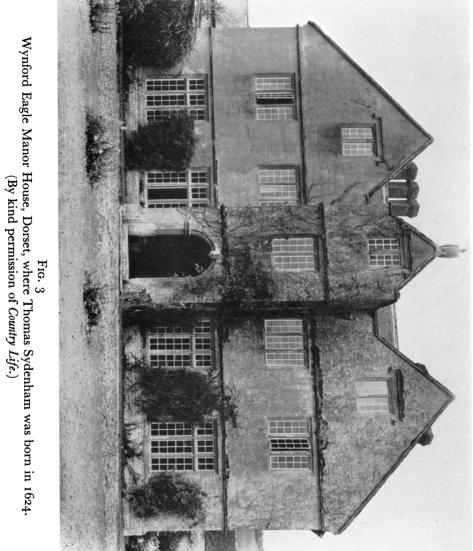
produced from the first edition of his Observationes Medicae, etc. (1676). (By kind A portrait of Sydenham by Mary Beale, re-Fig. 1

Photograph of Sydenham's handwriting from an unpublished manuscript entitled The Four Constitutions (Locke MS. C. 19, f. 170). (By kind permission of Bodley's Librarian.)

permission of Bodley's Librarian.)

SYDENHAM

THOMAS



observations, and his belief in the value of experience, must have been a great stimulus to Locke when he came to lay the foundations of empirical philosophy in his famous Essay Concerning Human Understanding.

Although Locke did some of the secretarial work for Sydenham's Medical Observations and, more important, constantly supported his views, he was in France when the book was published. It fell to Dr. John Mapletoft to translate it into Latin, and it was to him that Sydenham's main work was rightly dedicated. There is now an overwhelming accumulation of evidence showing that Sydenham originally wrote in English, and had his works translated into Latin. This does not, of course, mean that he did not understand Latin, but merely that he was, perhaps, rather doubtful about the elegancy of his style and preferred a better Latinist than himself. Mapletoft was an ideal man for the job as he was described by Ward²⁷ as 'a very polite Scholar, wrote Latin elegantly, was a great master of the Greek and understood well the French, Spanish and Italian languages'. The first indication that Sydenham's works were written in English comes from Dr. Henry Stubbe, 28 one of his contemporary critics, who wrote of Sydenham's first book on fevers: "Tis true he did not pen it in Latin, but another (Mr. G. H.) for him, and perhaps his skill in that tongue may not be such as to know when his thoughts are rightly worded.' The translator referred to is Gilbert Havers of Trinity College, Cambridge. This is corroborated by John Ward in his Lives of the Professors of Gresham College (1740), who mentions Dr. Mapletoft and Mr. Havers as the translators; and when this statement was challenged in the Gentleman's Magazine, Mr. John Mapletoft, 29 son of the doctor, testified that he had often heard his father mention that he had translated all Sydenham's works up to 1683. Some slight support comes from Sir Thomas Millington, and Sir Richard Blackmore, who mention Sydenham as an example of one who could reach the highest rank of physicians without 'Great Erudition and the Knowledge of Books'. 30 But the most important evidence is to be found in Sydenham's own manuscripts, all of which are in English: so too are all the rough drafts of essays or the copies written by Locke. Furthermore, in the manuscript collection of Sydenham's opinions on various diseases³¹ (published by Dr. W. A. Greenhill as Anecdota Sydenhamiana), all the English portions are specifically stated to have been directly copied from Sydenham's own manuscripts, whereas the Latin extracts are merely Sydenham's views on certain topics, put into Latin by the writer of the manuscript, as was the usual practice. When we compare Sydenham's own writings with the elegant Victorian prose of Greenhill's retranslation from Mapletoft's rhetorical Latin (in the Sydenham Society's complete edition) there are certain obvious differences. Sydenham wrote in the robust style of the seventeenth century with the plain medical facts interspersed with the occasional picturesque phrase: he does, however, tend to be repetitive, and he frequently makes most forceful attacks on his critics. These slight irregularities have been toned down in translation and a strong dash of classical erudition has been added instead.

Another young man who realized the value of Sydenham's writings, and constantly supported him, was Dr. Charles Goodall, later the President of the

College of Physicians. In 1676 Goodall wrote a defence of the College, ³² in the course of which he recommended Sydenham's forthcoming medical observations. When expressing his gratitude Sydenham referred to Goodall as one who 'defended me with the zeal and affection of a son towards a father'. ³³ The two doctors were very closely associated in practice, and after his friend's death, Goodall intended to publish a memoir on Sydenham. With this in mind he wrote the following letter to Sir Hans Sloane in 1703:

Good Doctor, I fully purpose to publish some posthumous Works of my father and your good friend Doctor Sydenham, upon this account I waited upon his son to request him to supply me with what memoirs his father left. He told me that what he had were put into your hands, and that if you pleased he should be very willing they should be printed by me. This is therefore to request you to let me know whether you are willing to part with them that I may doe right to the Author now dead, as I honoured him whilst living.³⁴

One of Goodall's notebooks³⁵ has found its way into the Bodleian Library. In the front of this manuscript book are several of Sydenham's medical essays which are almost identical with his *Processus Integri*. It has been published by Dr. W. A. Greenhill as *Anecdota Sydenhamiana*. They were written in an unknown hand, but since most of the other writing in the notebook is in Goodall's hand it does seem likely that these are some of Sydenham's posthumous works which Sloane passed on to him.

Much more research on Sydenham's manuscripts is needed: it is only from these sources that we can get the true flavour of his writings. Fortunately, it was customary in the seventeenth century for physicians to collect manuscripts as well as printed books, and hence several of Sydenham's original works have been preserved. As well as his writings in the Bodleian which have come down to us through Locke and Goodall, there are also two manuscripts in the Library of the Royal College of Physicians. His treatise on gout was passed on to the College by Dr. James Drake who helped him to write it. The other manuscript, entitled Medical Observations (1669), began virtually as the third, unpublished edition of his Treatise on Fevers, and was later greatly expanded. This manuscript which was given to the College by one of Sydenham's descendants, 36 is partly in his own handwriting and partly in Locke's. Two other unpublished works, yet to be traced, were sent to Amsterdam by John Locke. He had previously spent five years there as a political exile, and after his return to England, regularly exchanged medical information with Dr. Pieter Guenellon to whom he sent a treatise on children's diseases and a small book on phthisis which, in his own words, 'try to follow the pen of Dr. Sydenham'. This probably implies that Locke translated these works into Latin, or more likely French, which was the language they corresponded in. Finally, a letter, and a discarded preface to Sydenham's Medical Observations are in the Public Record Office; and extracts from his writings on gout and acute diseases are amongst the Sloane manuscripts in the British Museum.38

Sir Hans Sloane probably acquired these notes whilst he was a clinical apprentice to Sydenham. The story is told that Sloane first presented himself to

Sydenham with a letter of introduction recommending him as 'a ripe Scholar, a good botanist, and a skilled anatomist'. After reading this note, Sydenham, assuming his severe military manner, said:

This is all very fine but it won't do—anatomy, botany. Nonsense! sir. I know an old woman in Covent Garden who understands botany better, and as for anatomy, any butcher can dissect a joint just as well. No, young man, all this is stuff: you must go to the bedside. It is there alone you can learn disease.³⁹

Another apprentice was Thomas Dover. He had first-hand experience of the merits of Sydenham's cooling regimen when he himself caught smallpox.

In the beginning I lost twenty-two ounces of blood [wrote Dover]⁴⁰ in the Ancient Physician's Legacy. He gave me a vomit, but I find by experience purging much better. I went abroad by his direction till I was blind, and then took to my bed. I had no fire allowed in my room, my windows were constantly open, my bedclothes were ordered to be laid no higher than my waist. He made me take 12 bottles of small beer acidulated with spirits of vitriol every 24 hours. . . . I had of this Anomalous kind to a very great degree, yet never lost my senses one moment.

To another student, Richard Blackmore, we owe this anecdote illustrating Sydenham's contempt for medical writing: 'When one Day I asked him to advise me what Books I should read to qualify me for Practice, he replied, 'Read Don Quixot, it is a very good Book, I read it still'.'41

Sydenham's relations with the active members of the Royal Society have often been distorted. Though never contributing to their researches he never opposed them: he merely considered them irrelevant to his own dedicated task of improving clinical medicine. His exaltation of practical experience, and his disregard for the most erudite authors of the past, and the brilliant research of his contemporaries in the basic sciences, though obviously limiting his range did, at least, prevent him from making wild speculations, and helped him to avoid some of the pitfalls of his predecessors. Many of his closest friends, such as Boyle, Locke, Wren and Mapletoft, all Fellows of the Royal Society, were beginning to build on new foundations, in their various fields, after clearing away the rubble of the past. And Sydenham was regarded as one of their supporters by Henry Stubbe, the Royal Society's most severe critic. On one occasion he referred to Sydenham as a 'semi-virtuoso', and when urging Boyle to discontinue his experimental work Stubbe⁴² added: 'I know not what any physician may, as the mode is tell you to your face; but except it be such as Dr. Sydenham and young Coxe I believe not one lives that doth not condemn your experimental philosophy.' However, the fact that Sydenham gave only qualified approval to this experimental work is illustrated in the journals of Robert Hooke, for many years Curator of Experiments for the Royal Society.

He and Sydenham frequently met at Jonathan's Coffee House, or went for coach rides together. In June 1675 Hooke stayed with Sydenham for six weeks, and records that his host 'discussed with me of Physick, Religion, philosophy'. And on another occasion he asserts that he had 'confounded' Sydenham's 'novice metaphysica'. 44 To disagree with Sydenham, let alone to confound him,

must have been a memorable experience, as he was argumentative, dogmatic and outspoken. But his absolute integrity, and a rugged strength of character, gained him the lasting friendship and respect of many eminent men, although some lesser mortals were not so easily charmed by his forthright manner, and Sydenham often refers bitterly to his detractors. But does the picture he paints of constant persecution fit in with the facts? I have made a careful search of the works of his medical contemporaries, and have only found two critics who actually put their views in print. The first was Dr. Henry Stubbe of Warwick who, in his An Epistolary Discourse Concerning Phlebotomy attacked Sydenham's theory of smallpox as set out in his book on fevers. Sydenham believed that smallpox was a natural process due to a physiological renewal of the blood rather like moulting. Stubbe had little difficulty in shattering these notions, and Sydenham wisely discarded them in his subsequent writings. The other critic was Gideon Harvey, physician to Charles II, who, although he did not mention Sydenham by name, poured scorn on his cooling treatment of smallpox, and referred to him variously as 'a trooper turned physician', a 'western bumpkin' and the 'doctor of contraries'.45 These two critics are so far outnumbered by Sydenham's supporters, that I feel that the bitterness and resentment towards his enemies which he was constantly expressing are quite out of proportion to the published provocations, and reveal an unfavourable aspect of his character. But, of course, his enemies may have rankled him by their intrigues rather than their writings. Brown⁴⁶ mentions that 'by the whisperings of others he was baulked the Imployment in the Royal Family', and goes on to mention 'some of his collegiate Brethren and others whose indignation at length did culminat to that hight that they endeavoured to banish him, as guilty of Medicinal heresie, out of that illustrious Society'. Probably there was a faction in the College of Physicians in favour of withdrawing Sydenham's licence to practise. But Sydenham characteristically magnifies these episodes. On one occasion he wrote that he had been treated with the 'greatest indignitys beyond almost the suffrance of a man to the endangering not only of my reputation and lively hood but even my life its self'. 47 Even when we discount Sydenham's exaggerations, he did have some opponents. What was the cause of this opposition? The most important I think was Sydenham's general unorthodoxy, and his therapeutic innovations, particularly his cooling treatment, which his detractors ridiculed by letting it be known that this treatment simply meant taking a patient out of bed, and plunging him in a cold bath. Other doctors were resentful because Sydenham was an even greater rebel in the sphere of medicine than he had been in his youth on the battlefields of Dorset. And after the Restoration, the mere mention of his name would arouse hatred and prejudice in those who had fought in the Royalist army. Finally, we must admit that Sydenham provoked many of these attacks by his own uncompromising criticism of the errors of his medical opponents—he retained the forthright, peppery attitude of a cavalry officer all his life. When Dr. Thomas Willis came to practise in St. Martin's Lane, London, Sydenham let it be known that he had little regard for his clinical ability. 'Sydenham and some others in London,' wrote Ward, 48 'say of Dr.

Willis that hee is an ingenius man but not a good physitian, and that hee does not understand the way of practice.' Here perhaps Sydenham shows more regard for the truth as he saw it, than for Dr. Willis's reputation or livelihood. On other occasions, too, Sydenham seems to have gone out of his way to start quarrels. Henry Oldenburg, the German-born secretary of the Royal Society, who first came to England as agent for Saxony to the Long Parliament, was imprisoned in the Tower on suspicion of holding 'dangerous designs against the State'. After his release he refused even to meet Sydenham:

I must beg your excuse for not seeing Dr. Sydenham [he wrote to Boyle], ⁴⁹ who hath been the only man that I hear of who, when I was shut up, thought fit (God knows without cause) to rail against me, and that was such a coward, as afterwards to deny it, though undeniable. I confess that with so mean and immoral a spirit I cannot well associate.

Sydenham also seems to have been involved in some trouble with Boyle's sister, Lady Ranelagh, to whom he lent £100 for the purchase of property on Boyle's security. It seems that there was some delay in repayment and Lady Ranelagh⁵⁰ informed her brother that she had 'so much fallen' from Sydenham's favour '(Why I no more know, than I did how I came into it), that he has not since my return home, nor for a good while before, made me so much as a civil visit'.

But these slight flaws in his character are more than counterbalanced by Sydenham's immense contributions to medicine, made while labouring under considerable physical infirmities. Sydenham will, of course, always be remembered for his careful clinical observations, and nosological classification of the epidemic diseases of London. He adopted Boyle's corpuscular theory of epidemics, and grafted on to it the Hippocratic concept of an epidemic constitution. He believed that fevers changed their characteristics according to the particular constitution of the year, and according to the prevailing epidemic. The idea of the epidemic constitution had a therapeutic corollary in that the same disease in different constitutions required different treatments. Within this general theoretical background Sydenham then divided fevers into three main groups: smallpox (which included measles), intermittent fevers, and continued fevers, mainly typhoid and typhus. He then carefully studied the natural history of these broad groups and worked out, purely empirically, the most efficacious methods of treating them.

His treatment of smallpox, which roused such ridicule, was really quite simple. Hitherto variolous patients had been put to bed, covered with blankets and given heating medicines with the object of driving out, as rapidly as possible, what was considered to be the elements of the disease, namely, the pustules. This treatment probably caused the death of many patients due to dehydration. Sydenham's method was based on the Hippocratic view of healing in harmony with nature. He believed that the natural and proper time for the eruption to appear was the fourth day from the onset of fever, and he therefore kept the patient out of bed until the eruption appeared. He then allowed liberal fluids (particularly beer), a few bedclothes and bleeding in the case of young men.

This in general was his treatment, which was slightly varied according to the type of smallpox, the age, and constitution of the patient.

In an age when massive doses of drugs more apt to kill than cure was the therapeutic order of the day, Sydenham was sparing in their use. This is illustrated by his frequent use of expectant treatment, allied to a commonsense regimen. He rid the Pharmacopoeia of many useless, and often nauseating preparations. His main object was to search for specific remedies for each disease. And he did, in fact, play an important part in popularizing the use of Peruvian bark. This was then very expensive, and in its place many bogus preparations were being peddled. These were usually prepared from cherry bark and given an astringent flavour by dipping in aloes, and hence were more likely to produce diarrhoea than cure malaria. As a result Sydenham was, to begin with, uncertain of the efficacy of Peruvian bark, but later it became one of his favourite remedies not only in the treatment of agues, but also as a general tonic. He exhibited iron in the form of steel filings, or as a syrup in the treatment of hysteria and chlorosis. But his favourite medicine was opium, which he gave in the form of liquid laudanum, replacing the pill commonly used during his day. Often dispensing completely with drugs, he prescribed such simple remedies as fresh air, exercise, and a moderate diet. Horse riding was one of his remedies for consumption, and when Locke sought his advice, he replied: 'If you would but ride on horsebacke from Paris to Calis and from Dover to London upon that and drawing in this aer your symptoms will vanishe.'51 As a curiosity I might mention his cure by 'accubitus', a method of heating devitalized elderly patients by placing a youth or maiden of the same sex in bed with them.

But the true merit of Sydenham's teaching lay not in this or that particular method of treatment, but rather his revival of the Hippocratic method of basing clinical medicine upon observation free from speculation, which his friend Locke⁵² aptly summarized:

I wonder, that after the Pattern Dr. Sydenham has set them of a better Way, Men should return again to that Romance Way of Physick. But I see it is easier and more natural for men to build Castles in the Air of their own, than to survey well those that are to be found standing. Nicely to observe the History of Diseases, in all their Changes and Circumstances, is a work of Time, Accurateness, Attention and Judgement.

It was by these means that Thomas Sydenham, rebel, soldier and physician, laid the foundations of modern clinical medicine.

ACKNO WLEDGMENT

I am greatly indebted to the Wellcome Trustees for their financial support for the research on which this lecture is based.

REFERENCES

- 1. Burrows, Montagu, Ed. The Register of the Visitors of the University of Oxford (1647-1658). Campden Soc., 1881, p. 477.
- 2. HUTCHINS, JOHN. The History and Antiquities of the County of Dorset. Vol. I, p. 12.
- 3. WISEMAN, RICHARD. A Treatise of Wounds. 1672, p. 134.
- 4. —. An Appendix to Gunshot Wounds. 1672, p. 101.
- 5. LATHAM, R. G., Ed. The Works of Thomas Sydenham. 1848. Vol. 1, p. 3.
- 6. Burrows. Op. cit., p. 47.
- 7. The Family Memoirs of the Rev. William Stukeley, M.D. Surtees Society, 1882. Vol. 1, p. 70.
- 8. SEVERN, CHARLES, Ed. Diary of the Rev. John Ward, A.M. (1648-1679). 1839, p. 4.
- 9. News from the Dead, or the Miraculous Deliverance of Anne Green, who being executed at Oxford, December 14 1650, afterwards revived and by the care of certain physicians there is perfectly recovered. Oxford, 1651.
- 10. Brown, Andrew. A Vindication of Dr. Sydenham's New Method of Curing Continual Fevers. 1700, pp. 81-2.
- 11. Ibid., p. 81.
- 12. GREEN, M. A. E., Ed. Calendar of State Papers (Domestic Series), 1654. 1886, p. 14.
- 13. Ibid., p. 33.
- 14. Hutchins, John. Op. cit., vol. II, p. 433.
- 15. GREEN, M. A. E., Ed. Calendar of State Papers (Domestic Series), 1659-60. 1886, p. 29.
- 16. DESSAULT, P. Dissertation sur les Maladies Vénériennes, etc. Bordeaux, 1733, p. 359.
- 17. LATHAM, R. G., Ed., Op. cit., p. 3.
- 18. LOCKE MS. C. 20, f. 64 (Bodleian Library).
- 19. Ibid. C. 15, f. 212.
- 20. Ibid. C. 15, f. 23.
- 21. BIRCH, T., Ed. The Works of the Hon. Robert Boyle. 1772. Vol. vi, p. 390.
- 22. De Arte Medica (1669), P.R.O. 30/24/47/2, ff. 38-47, and Anatomie, P.R.O. 30/24/47/2, ff. 60-67 (latter published by Kenneth Dewhurst). Locke and Sydenham on the Teaching of Anatomy, Med. Hist., 1958, 2, 1-12.
- 23. GIBSON, A. G. The Physician's Art. Oxford, 1933.
- 24. SEVERN, CHARLES, Ed. Op. cit., pp. 241-2.
- 25. Dewhurst, Kenneth. Sydenham's original treatise on smallpox. *Med. Hist.*, 1959, 3, 278–302.
- 26. LOCKE MS. C. 29, ff. 19-28 (Bodleian Library).
- 27. WARD, JOHN. The Lives of the Professors of Gresham College. 1740, p. 277.
- 28. STUBBE, HENRY. An Epistolary Discourse concerning Phlebotomy. 1671, p. 180.
- 29. Gentleman's Magazine. 1743, 13, 528-30.
- 30. BLACKMORE, RICHARD. A Treatise upon the Smallpox. London, J. Clark, 1723.
- 31. RAWLINSON MS. C. 406 (Bodleian Library).
- 32. GOODALL, CHARLES. The College of Physicians Vindicated, 1676, p. 167.
- 33. LATHAM, R. G., Ed. Op. cit., vol. п, p. 83.
- 34. SLOANE MS. 4039, f. 253 (British Museum).
- 35. RAWLINSON MS. C. 406 (Bodleian Library).
- 36. PAUL VAILLANT.
- 37. LOCKE MS. C. 22, ff. 28/29 (Bodleian Library).

- 38. SLOANE MS. 1228, ff. 106-22; and 1846, ff. 50-60 (British Museum).
- 39. PAYNE, J. F. Thomas Sydenham. 1900, p. 190.
- 40. DOVER, THOMAS. The Ancient Physician's Legacy. 6th ed. 1742, p. 119.
- 41. BLACKMORE, RICHARD. Op. cit., p. xi.
- 42. HENRY STUBBE TO BOYLE, 4 June 1670: in Birch, R., Ed. Op. cit., vol. 1, p. xcv.
- 43. ROBINSON, H. W., and ADAMS, W., Eds. The Diary of Robert Hooke (1672-1780). 1935, p. 163.
- 44. *Ibid.*, p. 177.
- 45. HARVEY, GIDEON. The Conclave of Physicians. London, 1683.
- 46. Brown, Andrew. Op. cit., p. 82.
- 47. P.R.O. 30/47/2, f. 57
- 48. POWER, SIR D'ARCY, Ed. The Rev. John Ward and Medicine. Trans. med. Soc. Lond., 1920, 43, 273.
- 49. OLDENBURG TO BOYLE, 24 December 1667. In Birch, T., Ed. Op. cit., vol. vi, p. 258.
- 50. LADY RANELAGH TO BOYLE. Ibid., pp. 529-30.
- 51. LOCKE MS. C. 19, f. 163.
- 52. Familiar Letters between Mr. John Locke and Several of his Friends. 4th ed., 1742, p. 219.

ADDITIONAL BIBLIOGRAPHY

ALLEN, PHYLLIS. Medical Education in Seventeenth Century England. J. Hist. Med., 1947, I, 119-43.

BANKES, G. The Story of Corfe Castle. London, 1853.

Bayle's General Dictionary, Historical and Critical. Trans. J. P. Bernard, T. Birch and J. Lockman. 1739, pp. 459-60.

BAYLEY, A. R. The Great Civil War in Dorset. Taunton, 1910.

Biographia Britannica (1747). Vol. II, p. 837, and vol. VI, Pt. I, p. 3879.

BLACKMORE, SIR RICHARD. Discourses on the Gout, Rheumatism and the King's-Evil. London. 1735, pp. 24-5.

—. A Treatise of Consumptions and Other Distempers belonging to the Breast and Lungs. London (1724). Preface, pp. iv-viii; 34-5; 134; 180.

BLISS, PHILIP, Ed. Athenae Oxonienses. 1820. Vol. IV, p. 270.

BOAS, M. The Establishment of Medical Philosophy. Osiris, 1952, pp. 412-541.

BROWN, JOHN. Horae Subsecivae. 2nd ed. Edinburgh. 1859.

CAMERON, A. T., Ed. The History of the Sydenham Family. 1928. Privately printed by E. Dwelly.

CHAPLIN, A. The 'Caroline' or 'Laudean' Code of 1636. Proc. roy. Soc. Med., 1920, 13, 90-1.

COLE, WILLIAM. De Secretione Animali Cogitata. Oxford. 1674.

—. A Physico-Medical Essay concerning the late Frequency of Apoplexies. Oxford. 1689. pp. 113-14; pp. 149-50.

COMRIE, J. D. Selected Works of Thomas Sydenham. London. 1922.

CRANSTON, MAURICE. John Locke; a Biography. London. 1957.

CREIGHTON, C. A History of Epidemics in Britain from A.D. 664 to the Extinction of the Plague. 2 vols. 1891. Cambridge University Press.

CROSSLEY, JAMES, Ed. The Diary and Correspondence of Dr. John Worthington (1847). Vol. II, Pt. 2, p. 380.

Dewhurst, Kenneth. Sydenham on Smallpox. Brit. med. J., 1955, 2, 432-3.

- ... Sydenham's Letters to John Locke. Practitioner, 1955, 175, 314-20, 1047.
- -. The Four Constitutions. Med. Press, 1955, 234, 13, 303-4.
- -. Sydenham on a Dysentery. Bull. Hist. Med., 1955, 29, 5, 393.
- —. A Symposium on Trigeminal Neuralgia, etc. J. Hist. Med., 1957, 12, 1, 21-36.
- —. An Essay on Coughs by Locke and Sydenham. J. Hist. Med., 1959, 33, 4, 366-74.

European Magazine, 1789, 15, 185-6, 273.

FABER, K. Nosography in Modern Internal Medicine. London. 1923.

FOX-BOURNE, H. R. The Life of John Locke. 2 vols. London. 1876.

GEE, S. St. Bart's Hosp. Rep., 1883, 19, 2-4.

Gentleman's Magazine, 1790, 60, Pt. 1, 509-10; 1752, 22, 404, 510-16; 1801, 81, Pt. 2, 684, 1071.

Gunther, R. T. Early Science in Oxford, London, 1925-45. Vol. III, pp. 51-6; vol. vi, p. 135; vol. x, p. 181.

—. Early Science in Cambridge. Oxford, 1937, pp. 267-73.

HARRIS, WALTER. De Morbis Acutis Infantum. 1691, pp. 17-18.

House of Lords Manuscripts (New Series). 1702-4. Vol. v, pp. 15-16.

JAMES, R. A Dissertation on Fevers. London, 1775, pp. 4-6.

JOHNSON, SAMUEL. Life of Sydenham. Gentleman's Magazine, 1742, 12, 633-5.

JONES, H. W. The Portraits of Thomas Sydenham, New York, 1926.

MORE, L. T. The Life and Works of the Hon. Robert Boyle, Oxford. 1944.

MORTON, RICHARD. Pyretologia. 2 vols. 1692-4.

MUNK, W. The Roll of the College of Physicians of London. London, 1878, vol. 1.

NEWMAN, GEORGE. Thomas Sydenham, Reformer of English Medicine. London, 1924.

NIAS, J. B. St. Bart's Hosp. Rep., 1890, 26, 187-91.

NOBLE, MARK. Memoirs of the Protectorate House of Cromwell. 1737. 3rd ed. Vol. 1, pp. 387-8.

ORMONDE, MARQUESS OF. Calendar of Manuscripts, Hist. Manuscripts Commission 1908. (New Series.) Vol. v, pp. 354-5.

OSLER, SIR WILLIAM. John Locke as a Physician. Reprinted in An Alabama Student. London, 1926. Pp. 69-74.

OSWALD, ARTHUR. Country Houses of Dorset. London, 1935, pp. 44-5.

PARKS, T., Ed. The Harleian Miscellany. 1809. Vol. III, p. 478.

PAYNE, J. F. Thomas Sydenham. Dict. Nat. Biography, 29, 246.

PERCIVAL, EDWARD. Practical Observations on the Treatment, Pathology and Prevention of Typhus Fever. London, 1819, pp. 98 and 122.

PERKINS, T. and PENTIN, H. Memorials of Old Dorset. London, 1907.

Philosophical Transactions. London. 1665-6. Vol. 1, pp. 210-13.

PICARD, LOUIS MARIE FRÉDÉRIC. Thomas Sydenham—sa vie et ses Œuvres. Dijon, 1889.

PORTLAND, DUKE OF. Manuscripts (Hist. Manuscripts Commission). 1891. Vol. 1, p. 182. RICHARDSON, B. WARD. Disciples of Aesculapius. London, 1900. Vol. 11, pp. 658-73.

RIESMAN, DAVID. Thomas Sydenham, Clinician. New York. 1926.

ROBERTSON, C. G. All Souls College. London, 1899, pp. 124 and 129.

RUTT, J. T., Ed. The Diary of Thomas Burton, M.P. 1828. Vol. 1, p. 274.

SACHSE, W. L., Ed. The Diurnal of Thomas Rugg (1659-61), 1961, 91, 30, 172.

- SCHNECK, J. M. Thomas Sydenham and Psychological Medicine. Amer. J. Psychol., 1957, 113, 1034-5.
- SHORT, THOMAS. A General Chronological History of Air, Weather, Seasons, Meteors, etc. 1749. Vol. 1, pp. 336, 339-40, 344, 371, 379.
- SINCLAIR, H. M. and ROBB-SMITH, A. H. T. A Short History of Anatomical Teaching in Oxford. 1950.
- STUKELEY, WILLIAM. Of the Spleen, its Description and History. London, 1723, p. 81.
- SWAN, JOHN, Ed. The Entire Works of Dr. Thomas Sydenham. London, 1753.
- SYDENHAM, THOMAS. (Two letters.) British Museum. Add. MSS 4376, f. 75; and 33573, f. 158.
- —. Theologia Rationalis. (MS. Sloane, ff. 167-71, British Museum.)
- VEITH, ILZA. On hysterical and hypochondriacal afflictions. Bull. Hist. Med., 1956, 30, 3, 233-40.
- VICARS, JOHN. God in the Mount or England's Parliamentarie Chronicle. London, 1644.
- —. The Burning Bush not Consumed, or the Fourth and Last Part of the Parliamentarie Chronicle. London, 1646.
- VON LEYDEN, W. John Locke: Essays on the Law of Nature. Oxford, 1959.
- WADD, WILLIAM. Mems., Maxims and Memoirs. London, 1827, pp. 49, 124, 213-14, 231, 232.
- WALCOTT, REV. MACKENZIE E. C. Westminster: Memorials of the City, etc. (1849), p. 70.
- WHITELOCK, B. Memorials of the English Affairs. London, 1732.
- WINSLOW, F. B. Physic and Physicians. 2 vols. London, 1842.
- WITHINGTON, E. T. John Locke as a Medical Practitioner. Janus, 1899, 4, 393, 457, 527.
- -. John Locke's Medical Observations. Med. Mag., 1898, 7, 47, 313, 395.
- WOOD, ANTHONY. The History and Antiquities of the University of Oxford. Ed. John Gutch. Vol. II, Pt. ii, p. 968.
- —. Fasti Oxonienses. 1815. Vol. п, р. 93.
- WOOTTON, A. C. Chronicles of Pharmacy. 1910. 2 vols.
- Yost, R. M. Sydenham's philosophy of science. Osiris, 1950, 9, 84.
- YOUNG, THOMAS. An Introduction to Medical Literature. London, 1813, pp. 51-2.