

# The theories of Thomas Sydenham (1624–1689)

ANDREW LEONARD, BA

University College and Middlesex Hospital School of Medicine, London

Thomas Sydenham was for many years famous throughout Europe as 'the English Hippocrates' and 'the Prince of English Physicians'. Yet he is today remembered only through his eponymous chorea, itself now something of an historical phenomenon. He was born in 1624 in Dorset, the son of a squire, and during the Civil War fought for Parliament in his native county. In 1648 he graduated B.M. at Oxford, and from this time on he became good friends with, among others, Robert Boyle and John Locke. About 1660 he began medical practice in London. Three years later he became a Licentiate of the Royal College of Physicians. He never became a Fellow; his relations with the College and the medical orthodoxy it represented were often strained. In 1666 he published his *Methodus Curandi Febres* and ten years later his greatest work, *Observationes Medicae*. In his later years he was increasingly disabled by gout, yet he published four more books before his death on 29 December 1689.

The three-hundredth anniversary of his death provides an excellent opportunity to re-examine the thought of this 'sagacious physician' [1]. The content of Sydenham's theories has been entirely superseded by the developments of modern medicine, which make it hard for doctors to approach their forebears with sympathy. All too often, the medicine of past ages has been judged according to how well it accords with current opinions: ideas that seem to prefigure our own are given special attention; those that belong to different theoretical frameworks are ridiculed or ignored. In this short article I will first give an account of the content of Sydenham's theories before showing how that content was determined by social factors normally thought to be outside the province of medicine.

## Sydenham on fevers

For reasons that will later become clear, Sydenham attempted in his work to show that, just as there is regularity in the physical world, there was regularity in the medical world also. To do this, he introduced three fundamental concepts; the first was that there were *species of disease*.

Sydenham considered that all fevers were ultimately

caused by the presence of 'morbific matter' in the blood. This matter attained specific status, the disease species being determined by that of the morbific matter. Since Nature was 'uniform and consistent' in the production of disease, Sydenham could argue that 'each species of malady... hath taken as its portion its own state; proper, permanent, unequivocal, derivative from its essence' [2, 3]. For medicine to progress, it was therefore necessary 'that all diseases be reduced to definite and certain species' [4]. This was to be achieved by carefully compiled descriptions of the symptoms that typically accompanied each disease. These descriptions would constitute Sydenham's second important concept, the *disease history*.

This was to be a description 'at once graphic and natural' [5]. In writing such a history 'the clear and natural phenomena of the disease should be noted'; greatest emphasis was to be placed on those features which were 'peculiar and constant' [6]. Additional information on the weather and season was also important.

Sydenham's concept of the disease history was derived from Francis Bacon, and ultimately from the Hippocrates of *Epidemics I* and *III*. Bacon's idea of a natural history was radically different from the traditional Aristotelian version in that it defined groups on the basis of similarity, not difference. It was Bacon who first suggested the extension of this idea to diseases, taking as his model the case histories outlined by Hippocrates in the *Epidemics*. Sydenham used his disease histories as a means of bringing order to the contemporary perception of disease.

In the seventeenth century there was an economic incentive to individualise each patient's condition [7]. This situation was further complicated by the widespread belief that new diseases were constantly emerging. Jonathan Goddard, a contemporary, wrote 'It is to be considered what great variety of new cases do almost daily emerge, what Diseases, and new faces and conditions of Diseases, every year almost produceth, not to be found description of in all Physick Books extant' [8]. Proper disease histories were needed to overcome the confusion; indeed, such histories were lacking because too many 'have considered that disease is but a confused and disordered effort of Nature thrown down from her proper state and defending herself in vain' [9].

There was another purpose to the disease history. Sydenham saw disease as 'nothing more than an effort

Address for correspondence: Mr A. Leonard, 4 Midland Court, 158 Finchley Road, London NW3 5HP.

of Nature, who strives with might and main to restore the health of the patient by the elimination of the morbid matter' [10]. He was convinced that the symptoms of a disease were due not to the morbid matter in itself but to the attempts of the body to expel it. Fever, for instance, was 'Nature's instrument. By this she separates the pure parts from the tainted ones' [11]. By close observation of the disease, one could thus discover Nature's own method of eliminating the matter, which had been divinely ordained by a provident God. The true purpose of the disease history is that it suggests directly the correct course of therapeutic action. It 'leads us, as it were, by the hand, to those palpable indications of treatment, which are drawn not from the hallucinations of our fancy, but from the innermost penetralia of Nature' [12].

Sydenham's third important concept was the *epidemic constitution*. This was an attempt to demonstrate regularity in the rapid and bewildering succession of epidemic fevers. Each constitution was named after the disease most prevalent in it. This caused other fevers to become more like it; for instance, in the pestilential constitution of 1665-6 there were a number of epidemics of fevers similar to the plague but milder. Fevers could then be classified according to their role within the constitution: *epidemic* fevers were those that dominated a particular constitution; *stationary* fevers resembled the major fever but appeared and disappeared with it; those fevers that could occur in any constitution he termed *intercurrent*.

The epidemic constitution was another idea that ultimately had Hippocratic origins. But Sydenham's constitutions, unlike those of Hippocrates, did not depend on the weather. 'I am certain' he wrote 'that atmospheric alterations, so far as they may be determined by any sensible characters, may be very considerable, and yet no new species of epidemic originate' [13]. New constitutions originated 'neither in their heat nor their cold, their wet nor their drought; but they depend upon certain hidden and inexplicable changes within the bowels of the earth. By the effluvia from these the atmosphere becomes contaminate, and the bodies of men are predisposed or determinate, as the case may be, to this or that complaint' [14]. That the ultimate cause of a change in constitution was 'inexplicable' is typical of Sydenham's epistemological bias: only the proximate causes of things are knowable, the rest 'being hid in the mind of the Supreme Being' [15].

These three concepts were to be used to make the treatment of fevers more certain. Because diseases were regular in their actions, he thought that it would be possible to establish a 'setled certaine practise in the cure of sicknesses' [16]. This practice was the *methodus medendi* of which he hoped 'the commonweal may have the advantage' [17].

Though this system drew upon many elements that were a standard part of medical theory, the way in which they were linked together was novel. What needs to be explained is why Sydenham put them together in such a fashion.

## Sydenham, religion and politics in the seventeenth century

Sydenham was not alone in drawing inspiration from the works of Francis Bacon (1561-1626). Throughout the century there was something of a craze for Bacon's works, and they provided the impetus for an enormous amount of social and political action [18].

Bacon himself was a great lawyer and civil servant whose political career was marked by a ruthless and self-seeking disregard for all the ordinary standards of morality. He attempted to maximise his own power by reinforcing that of the king. He proposed the creation of a centralised bureaucracy for the Church and the State which would be administered in the king's name by men like himself. This hierarchical structure was mirrored in the natural philosophical works. Here he proposed an ordered programme of research that would lead, by application of his principles of induction, to the discovery of those laws by which God governs Nature. From knowledge of these laws, he claimed that it would be possible to reconstruct God's perfect laws for the government of civil society, lost at the Fall. These laws, being divinely ordained, would be irresistible, consolidating for ever the power of the monarchy and those who were, like Bacon, its servants. But this programme would ultimately benefit everyone: a perfectly governed country would be a Utopia [19].

Twenty years after Bacon's death his works were being used by people who would have been his sworn enemies. Members of radical Protestant sects had seized on his writings, with their emphasis on the importance of social reconstruction and on the possibility of Utopia, as apparently supporting their own democratic and decidedly anti-monarchical aims. The Parliamentary Army, in which Sydenham fought for some years, has been identified as the most important centre for the development and dissemination of these ideas [20].

The sectarians' justification for such radicalism was religious. By becoming incarnate, God had removed the distinction between himself and his creation. This led to a changed relationship between God and the world: if God was truly part of his own creation, then it implied that he dwelt equally in all people, thus reinforcing the sectarians' political demands for democracy, equality and the abolition of the established church. But it also implied that Nature was itself divine; that matter was self-moving; that Nature was animated from within, not governed from without by a God in heaven. They claimed that God was the *animus mundi*, the Soul of the World.

The sectarians' views revolted men like Sydenham and his friend Boyle, both members of the landed gentry. They had not risked their lives in a war against the king only to see the total destruction of the social order. Boyle wrote: 'There is lately sprung up a sect of men as well professing Christianity as pretending to philosophy, who... do very much symbolize with the antient Heathens and talk much of God, but mean

such a one as is not really distinct from an animated and intelligent universe' [21].

Boyle's natural philosophy was an attempt to disprove that matter was in any sense self-moving, and that it was, on the contrary, inanimate and ordered by a Higher Being. He also turned to Bacon for support, stressing different aspects of the original: in particular, Bacon's concept of the order of Nature, and his insistence that God *governs* Nature by means of immutable laws. Boyle's desire to maintain the existing social order was thus paralleled by his desire to demonstrate the unchanging order of Nature. God was not the Soul of the World, but the Lord of Creation.

Sydenham's work can now be seen to have the same purpose as Boyle's, but the order was to be demonstrated in the medical, not the physical, world. The species of disease were fixed. The disease histories, by defining the essential features of each species, showed the correct and natural method of cure, thus regularising the process of treatment. The epidemics came and went in a way that, though superficially confusing, could nevertheless be shown to have a method in it. Sydenham even hoped that constitutions would one day recur, thus enabling predictions to be made [22]

Sydenham was definitely aware of the sectarians' views on the role of God in the Creation and considered them dangerous. The following passage, from a work dedicated to Boyle, shows that Sydenham was keen to leave no doubt as to whose side he was on: 'The Supreme Deity, by whose power all things are produced, and upon whose nod they depend, hath in his infinite wisdom, so disposed all things, that they betake themselves to their appointed works after a certain order and method; they do nothing in vain; they execute only that which is the most excellent and that which is best fitted for the universal fabric, and for their own proper natures. They are engines that are moved, not by any skill of their own, but by that of a higher artificer' [23].

Sydenham allowed this view of God to be further worked out in his many epistemological asides mentioned earlier, discounting research into cause as useless. For instance: 'however much, by seriously inclining our minds, we may discover what Nature does, and by what organ she does it, the way in which she does it will always be unknown to man. No wonder. It is infinitely more credible that we... should be incapable of comprehending the method of the Supreme Artificer in his wondrous and wise machinery, than that a coarse smith should be but a rude admirer of the exquisitely elegant workmanship of a watch' [24]. Sydenham asserted that these limits to human knowledge were divinely ordained and necessary. The soul's duty towards God was to obey, and not to question. It seems that these limits may also be attributed to his fear of radicalism. By this interdict on research into cause, he hoped, in the quieter days of the Restoration, never again to encounter such 'dangerous' beliefs.

## Conclusion

Sydenham developed his concepts of the disease history and the epidemic constitution in order to demonstrate that diseases were regular in their actions and that epidemics came and went in a fashion that was orderly and dictated by God. His insistence that there was order in the medical world, and that that order stemmed from laws ordained by a provident God, was in order to promote an opinion concerning God, namely that He was the Lord of Creation. This was in opposition to the views of the radical Protestant sectarians that Sydenham would have encountered in the Army, whose democratic ideas sprang from their assertion that God was the Soul of the World, and equally the property of all people. Sydenham's need to suppress this view was, unconsciously or not, expressed in his medical writings. So, strangely, factors that one would usually consider as being outside the province of medicine can be shown to be its determining characteristics.

## References

All references to Sydenham's Latin works are taken from the translation by R. G. Latham. London: Sydenham Society, 1848. In the references the following abbreviations are used:

- OM — *Observationes Medicae*. London, 1676.
- OMP — The preface to the above.
- ER I — *Epistola Responsaria I ad Robertum Brady*. London, 1680.
- DE — *Dissertatio Epistolaris* etc. London, 1682.
- TDP — *Tractatus de Podagra*. London, 1683.

Where applicable, the Roman numerals give the chapter and section, and the Arabic the paragraph.

1. Goodall, C. *The Royal College of Physicians of London, founded and established by law* etc. London, 1684: 302.
2. OMP 12.
3. OM II.II.9.
4. OMP 7.
5. OMP 5.
6. OMP 9 & 10.
7. Jewson, M.D. Medical knowledge and the patronage system in eighteenth century England, *Sociology*, 1969, 9, 369–85.
8. Goddard, J. *A discourse setting forth the unhappy condition of the practise of physick in London*. London, 1670: 32.
9. OMP 13.
10. OM I.I.1.
11. OM I.IV.27.
12. OMP 14.
13. OM I.3.
14. OM I.II.6. See also TDP 35.
15. Sydenham: *Theologia Rationalis*. In Dewhurst, K. *Dr Thomas Sydenham (1624–1689)* etc. Berkeley: University of California Press, 1966: 148.
16. Sydenham: *De Arte Medicina*. In Dewhurst, K. *op. cit.*: 79.
17. OMP 16.
18. Webster, C. *The Great Instauration*. London: OUP, 1970.
19. I am indebted to Dr Julian Martin for the information in this paragraph.
20. Hill, C. *The world turned upside-down* etc. London: Penguin, 1975.
21. Boyle, R. *Works* (ed. Millan). London, 1744, 4, 376.
22. See ER I 58.
23. OM II.II.48.
24. DE 56.