

News, Notes and Queries

JOHNSON ON BOERHAAVE

IN the *Gentleman's Magazine* for 1739, there appeared a life of Boerhaave by Samuel Johnson, which occupies some thirty pages in the collected Works. This brevity is extenuated in the opening paragraph in these terms:

We could have made it much larger by adopting flying reports, and inserting unattested facts; a close adherence to certainty has contracted our narrative, and hindered it from swelling to that bulk at which modern histories generally arrive.

Such an introduction, from such a man, gives little encouragement to further abbreviation: but in these days we are brief from necessity, rather than from choice; and an outline, with some extracts, may serve to send some reader to the 'Lives of sundry eminent persons', which also includes notices of Sydenham and of Browne.

Herman Boerhaave was born on the last day of 1668 at Voorhout, near Leyden. His mother died before he was five, and his father, 'finding himself encumbered with the care of seven children, thought it necessary to take a second wife'. It was intended that young Herman should follow his father into the ministry, but the plan was prevented by illness:

In the twelfth year of his age, a stubborn, painful and malignant ulcer, broke out upon his left thigh; which, for near five years, defeated all the art of the surgeons and physicians, and not only afflicted him with most excruciating pains, but exposed him to such sharp and tormenting applications, that the disease and remedies were equally insufferable. Then it was that his own pain taught him to compassionate others, and his experience of the inefficacy of the methods then in use incited him to attempt the discovery of others more certain. [In the end Boerhaave himself] by tormenting the part with salt and urine, effected a cure.

So that he could be nearer his doctors, Boerhaave was sent to school in Leyden itself. He was conspicuous in abilities and application, and although his father died when he was only fourteen, he was able within six months to proceed to the University, where 'the same genius and industry met with the same encouragement and applause'. He studied Hebrew and mathematics, and took his degree in philosophy, with a dissertation on the distinct nature of the soul and body. In these pursuits he had exhausted his patrimony, and 'having obtained a very uncommon knowledge of the mathematicks, he read lectures in these sciences to a select number of young gentlemen in the university'. However, he soon turned to medical studies, and seems to have been able to please himself rather than be constrained by a curriculum:

At length, his propension to the study of physick grew too violent to be resisted; and, though he still intended to make divinity the great employment of his life, he could not deny himself the satisfaction of spending some time upon the medical writers, for the perusal of which he was so well qualified by his acquaintance with the mathematicks and philosophy.

But this science corresponded so much with his natural genius, that he could not forbear making that his business which he intended only as his diversion; and still growing more eager as he advanced further, he at length determined wholly to master that profession, and to take his degree in physick before he engaged in the duties of the ministry.

News, Notes and Queries

It is, I believe, a very just observation, that men's ambition is generally proportioned to their capacity. Providence seldom sends any into the world with an inclination to attempt great things, who have not abilities likewise to perform them. To have formed the design of gaining a complete knowledge of medicine by way of digression from theological studies, would have been little less than madness in most men, and would have only exposed them to ridicule and contempt. But Boerhaave was one of those mighty geniuses, to whom scarce any thing appears impossible, and who think nothing worthy of their efforts but what appears insurmountable to common understandings.

He began this new course of study by a diligent perusal of Vesalius, Bartholine, and Fallopius; and, to acquaint himself more fully with the structure of bodies, was a constant attendant upon Nuck's publick dissections in the theatre, and himself very accurately inspected the bodies of different animals.

Having furnished himself with this preparatory knowledge, he began to read the ancient physicians in the order of time, pursuing his inquiries downwards from Hippocrates through all the Greek and Latin writers.

Finding, as he tells us himself, that Hippocrates was the original source of all medical knowledge, and that all the later writers were little more than transcribers from him, he returned to him with more attention, and spent much time in making extracts from him, digesting his treatises into method, and fixing them in his memory.

He then descended to the moderns, among whom none engaged him longer, or improved him more, than Sydenham, to whose merit he has left this attestation, 'that he frequently perused him, and always with great eagerness'.

His insatiable curiosity after knowledge engaged him now in the practice of chymistry, which he prosecuted with all the ardour of a philosopher, whose industry was not to be wearied, and whose love of truth was too strong to suffer him to acquiesce in the reports of others.

Yet did he not suffer one branch of science to withdraw his attention from others: anatomy did not withhold him from chymistry, nor chymistry, enchanting as it is, from the study of botany, in which he was no less skilled than in other parts of physick. He was not only a careful examiner of all the plants in the garden of the university, but made excursions for his further improvement into the woods and fields, and left no place unvisited where any increase of botanical knowledge could be reasonably hoped for.

In conjunction with all these inquiries he still pursued his theological studies, and still, as we are informed by himself, 'proposed, when he had made himself master of the whole art of physick, and obtained the honour of a degree in that science, to petition regularly for a license to preach, and to engage in the cure of souls'; and intended in his theological exercise to discuss this question, 'why so many were formerly converted to Christianity by illiterate persons, and so few at present by men of learning'.

In pursuance of this plan he went to Hardewich, in order to take the degree of doctor in physick, which he obtained in July 1693, having performed a publick disputation, 'de utilitate explorandorum excrementorum in aegris, ut signorum.'

Having digressed (as he thought) in this compendious manner, he returned to Leyden, eager to resume his studies for the ministry; but he met with coldness and disappointment, for the rumour had been spread that, deserting orthodoxy, he had 'revolted to Spinosa'. In face of this untrue report, and having tried in vain to refute it, he:

thought it neither necessary nor prudent to struggle with the torrent of popular prejudice, as he was equally qualified for a profession, not indeed of equal dignity or importance, but which must undoubtedly claim the second place among those which are of the greatest benefit to mankind.

Having now qualified himself for the practice of physick, he began to visit patients, but without that encouragement which others, not equally deserving, have sometimes met with. His business was at first not great, and his circumstances by no means easy; but still, superiour to any

News, Notes and Queries

discouragement, he continued his search after knowledge, and determined that prosperity, if ever he was to enjoy it, should be the consequence not of mean art, or disingenuous solicitations, but of real merit, and solid learning.

His steady adherence to his resolutions appears yet more plainly from this circumstance: he was, while he yet remained in this unpleasant situation, invited by one of the first favourites of king William the third to settle at the Hague, upon very advantageous conditions; but declined the offer: for, having no ambition but after knowledge, he was desirous of living at liberty, without any restraint upon his looks, his thoughts, or his tongue, and at the utmost distance from all contentions and State-parties. His time was wholly taken up in visiting the sick, studying, making chymical experiments, searching into every part of medicine with the utmost diligence, teaching the mathematicks, and reading the scriptures, and those authors who profess to teach a certain method of loving God.

This was his method of living to the year 1701, when he was recommended by Van Berg to the university, as a proper person to succeed Drelincurtius in the professorship of physick, and elected without any solicitations on his part, and almost without his consent, on the 18th of May.

He now began to read publick lectures with great applause, and was prevailed upon by his audience to enlarge his original design, and instruct them in chymistry.

When the chair of botany fell vacant, Boerhaave was appointed, and introduced so many new plants that the botanical garden had to be doubled in extent. Soon after, he was made physician of St. Augustine's hospital in Leyden, to which students were admitted twice a week. 'This was of equal advantage to the sick and to the students, for the success of his practice was the best demonstration of the soundness of his principles.' In 1730, he was elected 'fellow of our Royal Society'.

'It cannot be doubted but, thus caressed and honoured with the highest and most publick marks of esteem by other nations, he became more celebrated in the university; for Boerhaave was not one of those learned men, of whom the world has seen too many, that disgrace their studies by their vices, and by unaccountable weaknesses make themselves ridiculous at home, while their writings procure them the veneration of distant countries, where their learning is known, but not their follies.'

In 1722, he had had a severe and prolonged attack of the gout, which he ascribed to his transgressing

those rules which he had a thousand times inculcated to his pupils and acquaintance. Rising in the morning, before day, he went immediately, hot and sweating, from his bed into the open air, and exposed himself to the cold dews.

At the beginning of 1723, he opened his school again, 'with general joy and publick illuminations'. He had a further serious attack in 1727, and frequent recurrences for the rest of his life.

From this time he was frequently afflicted with returns of his distemper, which yet did not so far subdue him, as to make him lay aside his studies or his lectures, till in 1726 he found himself so worn out that it was improper for him to continue any longer the professorships of botany or chymistry, which he therefore resigned April 28, and upon his resignation spoke a 'Sermo Academicus', or oration, in which he asserts the power and wisdom of the Creator from the wonderful fabrick of the human body; and confutes all those idle reasoners, who pretend to explain the formation of parts, or the animal operations, to which he proves that art can produce nothing equal, nor any thing parallel. One instance I shall mention, which is produced by him, of the vanity of any attempt to rival the work of God. Nothing is more boasted by the admirers of chymistry, than that they can, by artificial heats and digestion, imitate the productions of

Nature. 'Let all these heroes of science meet together,' says Boerhaave; 'let them take bread and wine, the food that forms the blood of man, and by assimilation contributes to the growth of the body: let them try all their arts, they shall not be able from these materials to produce a single drop of blood. So much is the most common act of Nature beyond the utmost efforts of the most extended Science!'

From this time Boerhaave lived with less publick employment indeed, but not an idle or an useless life; for, besides his hours spent in instructing his scholars, a great part of his time was taken up by patients which came, when the distemper would admit it, from all parts of Europe to consult him, or by letters which, in more urgent cases, were continually sent, to inquire his opinion, and ask his advice.

Of his sagacity, and the wonderful penetration with which he often discovered and described, at the first sight of a patient, such distempers as betray themselves by no symptoms to common eyes, such wonderful relations have been spread over the world, as though attested beyond doubt, can scarcely be credited. I mention none of them, because I have no opportunity of collecting testimonies, or distinguishing between those accounts which are well proved, and those which owe their rise to fiction and credulity.

Yet I cannot but implore, with the greatest earnestness, such as have been conversant with this great man, that they will not so far neglect the common interest of mankind, as to suffer any of these circumstances to be lost to posterity. Men are generally idle, and ready to satisfy themselves, and intimidate the industry of others, by calling that impossible which is only difficult. The skill to which Boerhaave attained, by a long and unwearied observation of nature, ought therefore to be transmitted in all its particulars to future ages, that his successors may be ashamed to fall below him, and that none may hereafter excuse his ignorance by pleading the impossibility of clearer knowledge.

Yet so far was this great master from presumptuous confidence in his abilities, that, in his examinations of the sick, he was remarkably circumstantial and particular. He well knew that originals of distempers are often at a distance from their visible effects; that to conjecture, where certainty may be obtained, is either vanity or negligence; and that life is not to be sacrificed, either to an affectation of quick discernment, or of crowded practice, but may be required, if trifled away, at the hand of the physician.

After an illness which was 'to the last degree lingering, painful and afflictive', Boerhaave died at the age of 70, and Johnson adds this memorial:

Thus died Boerhaave, a man formed by nature for great designs, and guided by religion in the exertion of his abilities. He was of a robust and athletick constitution of body, so hardened by early severities, and wholesome fatigue, that he was insensible of any sharpness of air, or inclemency of weather. He was tall, and remarkable for extraordinary strength. There was in his air and motion something rough and artless, but so majestick and great at the same time, that no man ever looked upon him without veneration, and a kind of tacit submission to the superiority of his genius.

The vigour and activity of his mind sparkled visibly in his eyes; nor was it ever observed, that any change of his fortune, or alteration in his affairs, whether happy or unfortunate, affected his countenance.

He was always cheerful, and desirous of promoting mirth by a facetious and humorous conversation; he was never soured by calumny and detraction, nor ever thought it necessary to confute them; 'for they are sparks,' said he, 'which if you do not blow them, will go out of themselves.'

Yet he took care never to provoke enemies by severity of censure; for he never dwelt on the faults or defects of others, and was so far from inflaming the envy of his rivals by dwelling on his own excellences, that he rarely mentioned himself or his writings.

He was not to be overawed or depressed by the presence, frowns or insolences of great men; but persisted on all occasions in the right, with a resolution always present and always calm. He was modest, but not timorous, and firm without rudeness.

News, Notes and Queries

He could, with uncommon readiness and certainty, make a conjecture of men's inclinations and capacity by their aspect.

His method of life was, to study in the morning and evening, and to allot the middle of the day to his publick business. His usual exercise was riding, till, in his latter years, his distempers made it more proper for him to walk: when he was weary, he amused himself with playing on the violin.

His greatest pleasure was to retire to his house in the country, where he had a garden stored with all the herbs and trees which the climate would bear; here he used to enjoy his hours unmolested, and prosecute his studies without interruption.

The diligence with which he pursued his studies is sufficiently evident from his success. Statesmen and generals may grow great by unexpected accidents, and a fortunate concurrence of circumstances, neither procured nor foreseen by themselves: but reputation in the learned world must be the effect of industry and capacity. Boerhaave lost none of his hours, but, when he had attained one science, attempted another: he added physick to divinity, chymistry to the mathematicks, and anatomy to botany. He examined systems by experiments and formed experiments into systems. He neither neglected the observations of others, nor blindly submitted to celebrated names. He neither thought so highly of himself as to imagine he could receive no light from books, nor so meanly as to believe he could discover nothing but what was to be learned from them. He examined the observations of other men, but trusted only to his own.

Nor was he unacquainted with the art of recommending truth by elegance, and embellishing the philosopher with polite literature: He knew that but a small part of mankind will sacrifice their pleasure to their improvement; and those authors who would find many readers, must endeavour to please while they instruct.

He knew the importance of his own writings to mankind; and lest he might be a roughness and barbarity of style, too frequent among men of great learning, disappoint his own intentions, and make his labours less useful, he did not neglect the politer arts of eloquence and poetry. Thus was his learning at once various and exact, profound and agreeable.

Johnson says nothing directly of Boerhaave's methods of clinical instruction, which were to prove his greatest contribution to medical teaching. The idea that medicine is better learned at the bedside than in the study can scarcely have been a new one; but its rooting and establishment at this time seems to have been the work of Boerhaave. Some of his success may be derived from his previous extraordinary accomplishment in theoretical studies; it could never have been said of him that he preferred a practical approach because of inability to appreciate medical or general learning. But most of his success must have come from those qualities of mind and heart which shine through Johnson's account.

I am conscious of the impiety of converting any essay of Johnson into *dissecta membra*; but he himself would have expected no better of a Scottish graduate, as witness this passage from the *Journey*:

Men bred in the Universities of Scotland cannot be expected to be often decorated with the splendours of ornamental erudition, but they obtain a mediocrity of knowledge, between learning and ignorance, not inadequate to the purposes of common life, which is, I believe, very widely diffused among them.

D. A. K. BLACK