

Texts and Documents

SOME LETTERS OF DR. THOMAS WILLIS (1621-1675)

by

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OCCASIONALLY 'DOCTORS' letters may be of more interest to medical historians than their published writings. In the seventeenth and eighteenth centuries the elegance of a physician's literary style was often more highly regarded than the astuteness of his clinical observations or the efficacy of his treatment. Medical books tended to be inflated with dubious hypotheses and the few worthwhile remedies were often buried beneath a welter of classical allusions and literary extravagances. Some doctors wrote medical treatises in order (as Smollett puts it) 'to force a trade' rather than to convey information. Smollett was able to write with authority as his own pamphlet *On the External Use of Cold Water* was intended to establish himself in fashionable practice. This was the age of the cynically successful Dr. Richard Mead who gave this advice to a young practitioner:

Should you have an itching to make your name known by writing a book on physic, yet so customary, I will advise you to choose the subject by which you think you will get most money; or that will bring you the most general business, as fevers, smallpox, etc. . . . The method of writing, if in your frontispiece you address not your book to some great man, is to club with some other physicians; and thus by way of letters to commend each other's good practice, and to support and make each other favour. But above all things, take particular care, let the subject be what will, that the words be well chosen, so to make up an elegant and fervid speech; since you have ten to one that mind the language more than the ideas.¹

In general, doctors' letters tend to be more direct and unaffected than the literary flourishes found in their books: they often contain precise recommendations as to the patients' treatment, and occasionally they illuminate aspects of the physician's social, domestic and material background. Thus correspondence between medical colleagues often gives the historian a better insight into the actual treatment of patients than is found in their rambling, inflated textbooks.

It is not, however, intended to insinuate that the works of Thomas Willis were published for 'revenue purposes'. Nevertheless, his books throw little light on his actual practice or on his social or domestic life. Who were his friends and patients? How lucrative was his practice? What contact had he, in later life, with the Royal Society? These eleven, hitherto unpublished, letters supply some of the answers.

Willis is too well known to warrant a lengthy introduction. Born in 1621 of yeoman stock, he virtually worked his way through Christ Church, Oxford, as a servitor to one of the canons. Graduating M.A. in 1642, the year the Civil War broke out, he served for a time in the Oxford garrison of the Royalist University legion of scholar-soldiers—probably in a medical rather than a military role, as there was a shortage of doctors during these unquiet times. He graduated M.B. in 1646 and began to

¹ John Nichols, *Literary Anecdotes of the Eighteenth Century*, 1812, vol. 4, p. 219.

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tour neighbouring markets in search of patients. John Aubrey² states that Willis could not afford to buy a horse when he began to practice and shared one with another young, struggling practitioner.

But lack of patients gave him an opportunity to join in the activities of 'an experimental philosophical clubbe' centred around John Wilkins, Warden of Wadham, which blossomed into the Royal Society at the Restoration: it is through this early interest that Willis exchanged ideas with such brilliant scientists and physicians as Wren, Boyle, Petty, Hooke, Ward and Wilkins. And in collaboration with some of these early scientists Willis helped to resuscitate Anne Green, a servant girl, who had been executed for aborting her illegitimate pregnancy by the son of the local squire. This bizarre incident doubtless gave a great impetus to his practice, particularly after his chief associate, Dr. William Petty, left Oxford for Ireland. And Willis's marriage to Mary Fell, although of no immediate material advantage, brought him preferment after the Restoration when her brother succeeded his father as University Vice-Chancellor and Bishop of Oxford.

In 1660 Willis was created Doctor of Medicine on the recommendation of the Archbishop of Canterbury and elected Sedleian Professor of Natural Philosophy at Christ Church. His preferment was merited, and not wholly due to patronage: he had written a controversial book on fevers and fermentation and had steadily enhanced his prestige through diligent practice and painstaking research.

The first letter which has come down to us was written barely three years after the Restoration. Willis was living at Beam Hall in Merton Street and was already the most successful physician in Oxford. From humble beginnings he had accumulated sufficient capital to purchase the manor of Bushleton in Herefordshire from John Aubrey, the diarist. In February 1663 he paid £1,200, leaving a 'balance of £300'. 'My estate,' wrote John Aubrey,³ '[was of] value 100 li Fere and Brecon. The debts and lawe suits, opus et usus, borrowing of money and perpetual riding. To my prayse [I had] wonderfull credit in the county for money. Anno . . . sold manor of Bushelton in Herefordshire to Dr. T[homas] Willis. Anno . . . sold manor of Stratford in the same county to Herbert [Croft] Lord Bishop of Hereford.'

DR. THOMAS WILLIS TO ANON⁴

Sir,

I understand from your self and Mr. Gregory that you are upon an agreement for the purchas of an estate for mee but seemingly the terms are not soe moderate as I expected. However that I shall not much insist on. But for the paimt. of the moneys I think it very fair to pay 1200 £ at first. But must expect a longer time than [Easter] term for the 2^d. for I cannot doe it except I borrow it all and about mid summer I shall get in a considerable summe of my owne for when you mention to have 1500 £ now [preservd] I cannot possibly doe it, except you will take 300 £ of it in Hereford and then I shall organise the second paimt to be in Michlemas Terme. I am straightned very much for returnes for my moneys but am promised most part shal be returnd within 10 daies: if there is hast of the invitoreys to be seald but if Mr. Gregorys cuming away I shall write to a friend in

² John Aubrey, *Letters Written by Eminent Persons in the Seventeenth and Eighteenth Centuries*, London, 1813, vol. 2, part 1, p. 585.

³ John Aubrey, *Brief Lives*, ed. A. Clarke, Oxford, 1898, vol. 1, p. 39.

⁴ MS Aubrey, 13, f.254 (Bodleian Library).

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London either to lay down the moneys or engage it shall be recd within a few daies after the sealing. I have noe more at present to heall with you onely my regards and [believe] I remain

Sir,
Your most humbl sevt.
THO WILLIS

Feb. 17 62/3.

DR. THOMAS WILLIS TO ANON⁵

Sir,

I have taken order your moneys shall be paid though I am to seeke still very much for returns. I spoke with Mr. Porter but he tells me that Mr. Potter owes him noe moneys and therefore he is unwilling to credier it here but if Mr. Potter is willing or desireous it should be soe he shall doe it. Therefor if you please to persuade Mr. Potter to pay in what I shall want to make up 1200 £. to Mr. Joseph Shelden I shall upon notice of the credipt thereof pay the money here. I pray use your interest to persuade him: I have noe more at present besides my hearts respects to your self I [remain]

Your most humble servt
THO WILLIS

Feb. 21, 62.

The next letter, dated 12 June, 1664, is addressed to Dr. Hodge of Christ Church—probably Nathaniel Hodges (1629–1688) who was elected to a studentship at Christ Church by the Parliamentary Visitors. He remained in London during the plague, being himself twice stricken. In 1666 he published: *An account of the First Rise, Progress, Symptoms and Care of the Plague*, and in 1672, his well-known *Loimologia* appeared.

DR. THOMAS WILLIS TO DR. HODGE⁶

Sir,

Though you have bin very particular in describing the constitution of the patient the beginning and progress of the disease and the success of remedies that hitherto have been usd to her, yet from it I am not soe fully satisfied as I should have bin, if I had seene the gentlewoman to had some discourse with her, neither can I hope at this distance to prescribe a course that will be much avaiable in soe pertinacious a defect as here is. However to show my forwardnesse to serve you in any regard I shal profer the use of some means that may be tryd without offence or much trouble to the patient and possibly may afford her some good, in such a case as I apprehend hers to be I would advise that after her body is prepared by some evacuation either by vomitt or easy purgation. That every morning in bed she take 4 pills of the malt that is prescribd, and then have a fomentation applied to the stomach and hypochondria for half an hour or more, then that she take about 2 ounces of the liquor prescribd, and lies in bed an hour thereafter, and sleep if shee can and be in a breathing sweat when shee rises to have her stomach and sides anointed with the ointment, and have a blew paper smeared over with the same to lay all over it on her arms and compleatly. But he make it of 9 clysters frequently; if those things are too hott and cause a greater ebullition of humours in the stomach I admit that she take the pills in bed and an heure after drinke a large quantity of new whey or possibly some mineral waters such as Tunbridge may be most proper for her. I shall next opportunity send you a powder I have whereby to prepare an artificial water in

⁵ MS. Aubrey, 13 f.255 (Bodleian Library).

⁶ MS. Sloane 810, ff.228–9 (British Museum).

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imitation of Tunbridge and not unlike it in operation which works very largely to your self, and in best wishes to the good of your patient I remain, Sir,
your most humble servt.

THO WILLIS.

Jun. 12. 64.

[thrafter] after shee should [visit] me a week or 10 daies.

Thos. Willis.

[Then follows a long prescription whose main ingredient is Peruvian bark to be followed by a liquor containing lemon, gentian and carduus benedictus in white wine. There is also an ointment containing lavender, tansies, orange rinds and fresh butter in Spanish wine. Other prescriptions are for a lemon lotion and some 'sugary pills'.]

This undated letter, translated from the original Latin, was written to a distinguished colleague while Willis was still practising in Oxford. The recipient was a common friend of Willis, Lower and Millington and had probably been one of the Oxonian 'sparkles', as the early experimentalists were known. As he was also friendly with Richard Allestry, a Canon of Christ Church and Professor of Divinity who had suffered during the interregnum for his Royalist and High Anglican sympathies, it is likely that the unknown recipient held similar loyalties and beliefs. Allestry was appointed Provost of Eton in 1665; this letter was probably written in the previous year.

Most Illustrious Sir,⁷

I have received your two letters almost simultaneously, certainly within the space of half a week; and both are full of kindness, consideration, and (what I particularly blush at) []*, none of which I deserve. Because the second letter requires a very quick reply and more consideration, therefore there is no time or rather at this moment no need to refer to your first letter. Your proposal in the case of the most honoured maiden, namely that she should for some time drink acidulated waters, I cannot but approve; especially since, it being the height of summer, she will have to refrain from the drugs used so far. But if the ordinary drugs and method of Medicine do too little against her inveterate and Herculean disease, I think recourse should be had to the great remedies, which deeply affect the crisis of the blood and humours and the diathesis of the internal organs and so eradicate certain morbid ferments. In this class I put the slightly acid drugs, provided they share the nature of vitriol and iron. It is probable also that the Thermae at Bath will be of help in the cure of this Lady. But if that Affect cannot be tamed by this type of remedy we must proceed from the camp of Apollo to that of Mercury and try what can be effected by salivation. But in this type of Medication I have little trust, having vainly tried it more than once in difficult cases.

But as regards the case of the Illustrious Lady described so elegantly in your second letter, I first of all presume that there is no suspicion of Lues Venerea, not even contracted from her husband. However, unfortunately, there is no small danger that (as you yourself think) a condition, which has afflicted the uterus so long and so severely, may sometimes turn out cancerous. But meanwhile let us make a conjecture about the nature of this disease. There are no signs yet of an ulcer being aroused, i.e. no blood or pus is being discharged. Nor does your second letter suggest that the Lady is complaining about any large, and as it were, indurated ulcer fixed anywhere around the parts of the uterus. It may therefore be thought most of those ills with which she is afflicted arise from the settling of parched blood and acrid humours in the parts of the uterus previously harmed

⁷ MS. Add. 34, 727, f.100 (British Museum).

*One word indecipherable.

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and then weakened; from which probably a signal and almost constant phlogosis, with intense torture, is brought on, like that usually aroused in blind haemorrhoids. I have occasionally known women to suffer for long for the same reason from symptoms very similar to those of this Lady; in fact I am at this time treating a Noble Woman suffering from this sort of Affect of the uterine parts, though to a lesser degree.

As for therapy, the stronger cathartics, nay almost all evacuants and drugs which immoderately excite the blood are bad and equally to be avoided. For such drugs drive the saline or burnt-up wastes of the blood rapidly towards the affected parts, and, by stirring up the humours gathered and stagnating there, make them wilder. Wherefore even topical remedies (saving only anodynes) often cause great harm.

The Curative intentions are very narrowly confined and comprise practically only these two aims, namely to sweeten the blood and meanwhile to draw off its wastes and dregs from the affected parts. Phlebotomy from the veins of the arms is to be used, and serves both intentions. And in a similar case I have known the following remedy to bring great help, namely that every month or six weeks up to 5 or 6 ozs. of blood should be let. In place of purging the bowels should be loosened by the use of softening Enemas and now and then a gentle purge.

If a draught of whey, with infused flowers of pale Roses and correctives, suit her, exhibit it every 7th or 10th day; or if through queasiness of the stomach Medicines are required in very small quantity I would prescribe pills of this sort, which contain nothing deleterious.

Rx. Best Senna 1 oz., Rhubarb 6 drachms, lemon sandal 1 drachm, salt of Absynth $\frac{1}{2}$ drachm, yellow Oranges 1 drachm; cut and pound. Infuse lukewarm in water of Fumaria $\frac{3}{4}$ pint for 12 hours. Strain. Evaporate to an extract in a very gently heated Bath, adding towards the end best Senna powdered 2 drachms, Rhubarb powder $1\frac{1}{2}$ drachms, lemon sandal 1 drachm. Make a mass and form into pills. Dose 2 scruples to $\frac{1}{2}$ drachm.

Prepare this sort of distilled water, of which she is to take 3 to 4 ozs. twice or thrice a day, sweetened with Syrup made of []* stuck on a pin and imbued with powder of white sugar.

Rx. leaves of hart's-tongue, Alchymilla, Pylosella, Plantago, Bugle, Tapsus Barbatus, of each 3 handfuls; rind of 4 Oranges. On all this pour 3 pints of whey. Distill in a common vessel. It is perhaps fitting to lessen the pain that she should sit on a perforated seat and draw into the affected parts the fumes evaporating from a hot decoction of this kind: Rx. leaves of tapsus barbatus, flowers and leaves of []*, of each 3 handfuls. Cook in spring water s.q. If pessaries can be used smear them with an ointment of populneum or linseed, or both mixed together and pounded till black in a lead mortar.

But the best method of cure is to use milk or whey daily in large quantity, or (if obtainable) slightly acid waters, so long as they contain no pungency, like those drunk at Buxton in Derbyshire.

Above all let her try ass's milk, of which she should drink about $\frac{1}{2}$ pint morning and evening, using meat only at dinner and provided it is well-cooked and of gentle nutrition. If she is content with whey alone she may expect signal benefit by continuing the use of it for a whole month; i.e. let her morning and evening drink ass's or cow's milk raw and mixed with the aforesaid distillation and sweetened with rose sugar or syrup of violets. At other times let her drink it cooked with bread or dehusked oats, adding a portion of spring water.

These, most honourable Sir, are what occur to my mind regarding the healing intentions and formulas of remedies to be used in the case of this illustrious Lady. I must leave it to your discretion whether these are properly suited to her disease and whether they agree well with the temperament of her constitution and her strength. Nay, I submit everything with a reminder of my deep affection and of my obligations. Please commend me to the Lady your patient. Dr. Alestree, Dr. Millington and Dr. Lower greet you. Farewell. Your most humble servant,

Thos. Willis.

*One word indecipherable

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As a cardiac remedy (which also may be a depurative of the blood) let her take night and early morning a dose of this electuary. Rx. fresh flowers of borage, fumaria, white and red Lamia, of each 4 ozs.; pound well in a marble mortar; add 1½ lb. of white sugar, stirring it in and reducing it to a conserve. Add powder of red coral and ivory in a marble with juice of oranges, of each ½ oz., with s.q. of syrup of coral. Make an electuary.

Willis's advice to his brother is the essence of therapeutic simplicity. When soliciting his company, owing to 'a great occasion of sadness', he offers a clue to its date as on 2 May 1667 Richard Willis, the physician's son, was buried in Merton College Chapel.

This is the last letter to be traced before Willis moved to London about the end of 1667, or the beginning of 1668. His Oxford practice had grown to such an extent that he had taken consulting rooms at 'The Angel' a High Street coaching inn opened in 1662. It was conveniently situated opposite 'The Mitre' where coaches taking wealthy invalids to Bath and London stopped. Next door to the inn was Boster Hall (now 86/87 High Street) where Willis also leased rooms with three other medical practitioners. Why did they need so much accommodation? It is tempting to speculate after the recent bicentenary of the foundation of the Radcliffe Infirmary that the combined accommodation at 'The Angel' and Boster Hall was, in fact, a small hospital where seriously ill patients could be detained under skilled observation.⁸

DR. THOMAS WILLIS TO BROTHER⁹

Good Brother,

What you mention of being troubled with the wind in your stomach I suppose to be of noe ill consequence but in a short time twill pass away of it self. In the meane time carry in your pockett candid orange pill or enula campanu or zedoaria and eat a little at a time of it. I shall be glad to see you here. Your company will be now acceptable we having a great occasion of sadness.

I remain,
Your affectionate Brother,
T.W.

Richard Fincham, a patient of Dr. Henry Power of Elland, near Halifax, was suffering from asthma, on which Willis was an authority: indeed his writings have been described by Major as 'unexcelled' in seventeenth-century literature. When seeking Willis's advice Power included his own views together with the patient's account of his symptoms.

Henry Power, M.D., F.R.C.P., F.R.S. (1623–1668), was a man of parts: physician, naturalist, chemist, astronomer and microscopist, he demonstrated 'Boyle's' Law before the 'Father of Chemistry', although the latter was the first to realize the significance of these studies on the volume and pressure of the air. When a Cambridge undergraduate, Power had regularly corresponded on scientific matters with Sir Thomas Browne (1605–1682) whose *Religio Medici* (1643) was dedicated to his

⁸Further evidence is to be found in Ward's *Diary*, vol. 2, pp. 551–52, in this reference to a fluxing chair used in the treatment of syphilis: 'The chair seen at ye Angel, an excellent one to sweat in, and great conveniencies to[o] put fires in, and open to take breath in, none canne indure itt halfe an hour'.

⁹MS. Tanner 41, f.122 (Bodleian Library).

father, William Power, merchant of Multore Hall, near Halifax.

His son, Henry, began to experiment on the volume and pressure of the air in 1653 when he carried out the Torricellian experiment from the summit of Halifax Hill rising 1,000 ft. above the town.¹⁰ He compared the difference in barometric pressure at the summit with that at the bottom of the hill and concluded that pressure variation would be useful in ascertaining the height of mountains. After his move to Elland Hall, Power's medical practice afforded him little time for further experiments, and also prevented him from publishing his earlier observations. But the combination of Boyle's stimulus and Power's friendship with another scientist, Richard Towneley of Towneley Hall, near Burnley, served to renew his interest. On 27 April 1661, Power and Towneley measured air pressures at different altitudes on Pendle Hill. They found that 'the elasticity of the air' decreased as they descended; and a year later, they carried out similar measurements while descending a coal mine when the 'level of mercury fell 3 in.' Boyle included their observations in the second edition of his *New Experiments Physico-Mechanical* (1662), and subsequently the proportionality between the density of the air and its pressure was referred to as Towneley's hypothesis by Hooke, Newton and other scientific contemporaries. Webster, who has made a detailed chronological study of these experiments, states that 'Boyle's Law was, to some extent, realized earlier by Pascal and Roberval, Power and Towneley independently and possibly before Boyle'. But he concludes that 'Boyle outshines the other investigators, both in the comparison with his work and theirs, and the ultimate influence of his work on future generations'.

When Power consulted Willis about Richard Fincham's illness, though still practising as a provincial physician, he had a wide scientific reputation as a versatile Fellow of the Royal Society. Power visited Willis in London in 1668, and died shortly afterwards, possibly due to an illness contracted during his return to the North.

THE REPLY OF THE MOST EMINENT DOCTOR WILLIS¹¹

I have perused the case of Mr. Richard Fincham, who suffers from convulsive and periodic asthma. It was described clearly and most graphically by my most learned medical colleague, who also added his theory of the same disease, modified to the particular condition of the suffering gentleman. There seems no need to discourse further of the causes either of this condition or of the symptoms pertaining to it. As regards the cure, or rather the alleviation, of this illness, the principal intentions will be the following:

1. to render and keep the body pure, so that the sandy mass of excrementitious humours may not provide material for more frequent and more serious paroxysms. by collecting in the viscera and blood mass and thence pouring itself out either into the lungs or into the nerves dedicated to respiration. To this end it does not seem out of place to exhibit the milder Cathartics and occasionally Emetics, if he can stand an easy vomiting. In those diseases I have found nothing more efficacious than that the patient should once or twice a month consume large quantities of milky beer with uncooked leaves of Thistle, and that then vomiting should be induced by a feather or finger thrust into the throat; this must be repeated many times. Furthermore you are to exhibit frequently Hiera with Agaric or stomachics with gums.

¹⁰ For details of Power and Towneley I am indebted to C. Webster's excellent paper 'The discovery of Boyle's Law and the concept of the elasticity of air in the seventeenth century', *Arch. Hist. exact. Sci.*, 1965, 2, 441-502.

¹¹ Willis replied in Latin but his letter cannot be traced. This translation has been made from Power's transcript (MS. Sloane 1393, f.8v, British Museum).

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2. the serum of the blood is to be drawn off at suitable times by Diaphoretics or Diuretics. For this reason the use of millipedes is often wont to be effective; and frequently help is afforded by tincture of tartar salt, salt of amber, and flowers of Armoniac salt.

3. besides these evacuants repeated use should be made of anything that restores the nervous liquor and keeps it in its proper crasis; such as spirits of hartshorn, soot, blood, and sal Armoniac; in these cases I particularly recommend Balsam of Sulphur. Wherefore in the intervening times, when he is free from Cathartics, exhibit the aforesaid medicaments twice or thrice a day in a convenient vehicle, which might well be a decoction of appropriate roots and herbs, or distilled water. Fontanelles often help in this disease. Sometimes Phlebotomies are instituted with much success, both when the paroxysm is imminent, and at other times as a precaution. It will not be easy to lay down a particular Methodus Medendi with individual formulas for remedies; these must be left to the doctor on the spot. If at a later time you notify me by letter of the success of certain remedies or of the regimen of a certain doctor I might perhaps be able to adapt my Advice more particularly to the present condition of the suffering gentleman.

H.P.

When Willis moved to London his friends of the Royal Society hoped that he would attend their meetings and take an active part in their investigations. But the demands of practice and preoccupation with his writings gave him too little time.

Since Lower and Willis had popularized the spring at Astrop in 1664, the latter had been regarded as an expert on assessing the medicinal properties of various spa waters. And when Dr. Speed of Bristol claimed to have prepared a useful artificial medicinal water the Royal Society sought Willis's advice. He was, however, unable to attend the meeting, but on 12 December 1667, he sent the secretary, Henry Oldenburg, an unfavourable reply¹² dictated to his apothecary and amanuensis John Hemmings, who had probably analysed the sample.

Sr.

I am againe hinder'd from waiting on ye Royall Society and giving an account of those powders you left with mee. Be pleas'd to present my service to my Lord President and the Company with my sense in breif of those materials. The powder that is to make the Spaw water is either Vitriolum Martis at ye best, or what I rather think any common English Coperas dried and powdere'd. This I shall make out when I come. For ye other powders each of em being severall Calax of Minerall water evapourated, there is noe use of ym nor any thing worth enquiry to be insisted on about any of ym. This is all at present from Sr.

Yor most humble servt.

Tho. Willis.

Oldenburg¹³ then passed on Willis's advice to Boyle in this letter dated 14 January 1668:

Dr. Willis both examined ye powders come from Bristol and saith yt ye powder, wch. is to make ye spaw-water is either Vitrolum Martis at ye best, or rather only a Common English Cooperas dried and powdered. For ye other powders, each of ym being a severall Calx (he saith) of Minerall water evaporated these is no use of ym, nor any thing worth enquiry to be insisted on about any of ym.

¹² Royal Society Library (English Letters) W3, 9, read 12 December, 1667. Published in *The Correspondence of Henry Oldenburg*, ed. and trans. by Rupert Hall and M. B. Hall, Madison and London, University of Wisconsin Press, 1967, vol. 4, p. 33.

¹³ *The Correspondence of Henry Oldenburg*, op. cit., vol. 4, p. 110.

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S^r I have taken order your money shall be paid through
I am to provide the way must be returned. I took will
my partner. But he has more than my partner ever has nor
more, and therefore he is unwilling to receive it here. And if
my partner is willing or otherwise I should be for. He please do
it. Therefore if you please to provide my partner to pay in
what I shall have to make up 1200^l to my partner's partner
I shall ever notice of the receipt thereof pay the money he
I pray of your friend to provide him: I have no more
at present to do, my dear at work to your best friend

I must humble send
this letter

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Willis's letter concerning the purchase of John Aubrey's estate (MS. Aubrey, 13.f.255, Bodleian Library).

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In the next undated letter, Willis sent Dr. White some instructions for making a truss together with details of its application.

DR. WILLIS LETTER TO DR. WHITE ABOUT THE TRUSS¹⁴

Sr.

I have here sent you a Truss for the falling out of the fundament. A Ld. a patient of mine, has used it with verry much benefit these many years. You may easily guess at the use of it. The wastband is to goe about the middle, the points are to truss it to your doublet. If you must weare it in the night the claspholes are to bee fitted to claspes that are to bee on the skirts of a canvas wastcoat. But if you need it not in the night you may take all the eyes or claspholes off. The button is to bere on the fundament to booy it up, and the bag is for the members, the two straps are to come up on each thigh, and the clasp holes to fit to the claspes on the wastband. If in any thing else I may serve you, bee assured I shall most readily do it, being mindful of that great obligation you have formerly laid on mee. I deserve your prayers for mee and mine and remaine Sir

Your most obliged friend and humble servant.
T.W.

In the State Papers there are several references to Willis's friendship with Sir Joseph Williamson (1633–1701), statesman and diplomatist. After Westminster School and Queen's College, Oxford (where he became a Fellow in 1657), Williamson was appointed Keeper of the King's Library in 1661, and thereafter gained steady promotion as a civil servant. His skill at gratifying suitors and petitioners soon brought him wealth and influence. When the Court moved to Oxford to escape the plague, Williamson edited the *Oxford Gazette*: he also managed the Post Office, became M.P. for Thetford and was one of the British plenipotentiaries to the Congress of Cologne. He was a Fellow of the Royal Society (eventually becoming its President) and reached the peak of his career in 1674 on his appointment as Secretary of State. Willis was probably Williamson's physician: they were certainly good friends, as in 1669 during his Continental travels, the latter presented him with some casks of wine from Florence and Marseilles.¹⁵ They shared a common friend in Dr. T. Lamplugh, Fellow of Queen's College, Oxford, who informed Williamson on 13 February 1674,¹⁶ that 'Dr. Willis and his lady frequently remember you'. And when Williamson's brother proposed to travel from the North to London he sought Willis's advice on prophylactics against the hazards of a long journey through fever-ridden England.

DR. THOMAS WILLIS TO SIR JOSEPH WILLIAMSON¹⁷

Sir,

The best means I can advise for yr. Brother is to prescribe some medicines to take in his journey; and for that purpose I have ordered a Confection, let him take it morning and night as much as a chesnut. There is also a cordial mixture to be taken, 2 or 3 spoonfuls att any time that he is very ill and his Cough very violent. When he comes to Town I

¹⁴ MS. Sloane, 1513, f.1 (British Museum).

¹⁵ C.S.P. (Dom), 1668–1669, ed. E. H. Blackburne Daniell, London, H.M. Stationery Office, p. 657.

¹⁶ *Ibid.*, p. 150.

¹⁷ P.R.O. Sp. 29/318, 30 November, 1672.

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shall be ready to serve him, and glad of any other occasion to express how much I am,
Sr.

Yr. most humb Servant.

Thos. Willis.

30th Novem. 1672.

Willis was one of three physicians who signed a medical certificate enabling Lady Moreland to return to France for reasons of health. Daughter of Daniel de Milleville, Baron de Boissny in Normandy, she married in 1657 Sir Samuel Moreland (1625–1695),¹⁸ diplomatist, mathematician and inventor. As a staunch Parliamentarian, Moreland was sent to Sweden to conclude an alliance; later he visited Geneva to intercede for the Vaudois during their persecution by the Duke of Savoy. It was probably on his journey to Geneva that he met his wife. At the Restoration Moreland changed his allegiance so deftly that he was made a baronet by Charles II, and thereafter devoted his life to designing ingenious inventions in hydrostatics and hydraulics.

Lady Moreland's certificate was also signed by Sir John Hinton (1603–1680),¹⁹ physician-in-ordinary to Charles II. An ardent Royalist, Hinton joined the King at York, served at the Battle of Edgehill and was afterwards 'created' doctor of medicine at Oxford on his appointment as physician to Prince Charles. He attended the Queen at Exeter where she was 'great with child and weake having fitts of the Mother and a violent consumptive cough'. After supervising the birth of Princess Henrietta, he accompanied the Queen to Cornwall whence she embarked for France. An exile during the interregnum, Hinton was imprisoned on his return but eventually gained his freedom through the 'intercession of some zealous women my patients'.

The third signatory was Luke Rugeley (1666–1697),²⁰ a Cambridge graduate who lived in Bloomsbury Square and specialized in ophthalmology. In his will Rugeley 'committed his choice secret for curing sore eyes to a surgeon of this city, for whom he had an entire affection'.

Lady Moreland was seriously ill with dropsy. She must have died shortly after her return to France, as her husband remarried in 1670.

These are to certifie whome it may concerne that the Lady Moreland doth now labour under the distemper of the Dropsie; and by her phisitions thought hardly curable; her Ladyship having a desire to returne into France, her native Countrey; wee whose names are heere under written; doe conceive the aire may be advantagious to her health. Given under our hands the 23 September, 1668.

John Hinton.

Luke Rugeley.

Tho. Willis.

A Passe for ye Lady Moreland and hir 2 children with 2 Mayd servants, and a footboy.²¹

In the following letter, Willis appealed to Williamson on behalf of a kinsman and neighbouring landowner, John Greenriff, who was anxious to avoid the expense of being appointed High Sheriff of Monmouthshire.

¹⁸ *Dictionary of National Biography*, vol. 13, pp. 965–70.

¹⁹ W. Munk, *The Roll of the Royal College of Physicians of London*, London, 1861, vol. 1, pp. 329–31.

²⁰ *Ibid.*, vol. 1, pp. 267–68.

²¹ P.R.O. (S.P.) 29/246, 23 September 1668.

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DR. THOMAS WILLIS TO SIR JOSEPH WILLIAMSON ²²

Sir,

I intreate you to doe mee a kindnesse in behalf of a Kinsman of mine in Wales. His name is Mr. John Greenriffe who about 4 years ago was High Sheriffe for Glamorgan-shire, and now (as he writes mee word) is threatened to be returnd to be Sheriff of Monmouth Shire, although in this County he has not 100p annum and not above 400 £ annum in the other. I pray sir, if he be returnd and it be in your power to gett him of (*sic*) procure it to be don. He shall not be unthankful to you and you will very much oblige.

Sir,

Yor. humble Servant.

Tho. Willis.

DISCUSSION

These letters contain much general information on Thomas Willis's practice and, in particular, they give some insight into the material rewards of seventeenth-century practice. Only a few physicians acquired great wealth and Willis was one of them. This vein of prosperity can be traced in the successors to his practice: first Richard Lower, then Thomas Short and finally John Radcliffe, whose enormous wealth is still perpetuated in several resplendant Oxford benefactions. They should all be grateful to Willis whose industry laid the foundations of their success. Willis's early struggles have been over-stressed. His initial penury was brief: he came into fashionable practice much earlier than has been realized. A domiciliary notebook of 1650²³ shows that within four years of qualification he was treating county families and wealthy farmers, including the Rowneys, whose descendant Thomas Rowney was one of the founders of the Radcliffe Infirmary. Only four years after buying John Aubrey's estate for £1500, the Oxford Poll Tax returns reveal that he had £300 capital together with an annual income of £300 which was, in fact, the highest in Oxford.²⁴ Some years later he acquired the estate of Ham Manor, near Chertsey, Surrey.²⁵ This handsome, moated riverside residence (formerly leased to Sir George Askew, who commanded the Fleet in the West Indies), has variously been described as Ham Court, Ham Farm, Ham Ham Farm and Ham Manor. 'In Chertsey neare [the] parish of Ham-Ham where the new river joins the Thames', wrote Aubrey,²⁶ 'there is a faire house surrounded with a moat. The lease belongs to the Deane and Chapter of Windsor. The house possessed by Sir George Askue the famous seman, since purchased by Dr. Thomas Willis.' Unfortunately the purchase of this estate drew Willis into protracted legal proceedings concerning the advowson of Kingston-on-Thames. The living had been transferred to Willis by Elizabeth, Countess of Dysart, but John Ramsey entered a caveat and the living was without an incumbent until 1670 when the Bishop intervened. It was finally agreed that Willis should hold the living which eventually passed to his son.²⁷ On the latter's death in 1692 it reverted to

²² P.R.O. (S.P.) 29/248, 27 October 1668.

²³ 307563 MS. 799A (Wellcome Institute of the History of Medicine).

²⁴ H. E. Salter, *Surveys and Tokens*, Oxford, 1923, p. 233.

²⁵ *The Victoria History of the County of Surrey*, ed. H. E. Malden, London, Constable, vol. 4, p. 399.

²⁶ MS. Aubrey, 4, f.7 (Bodleian Library).

²⁷ *Victoria History of the County of Surrey*, op. cit., p. 513.

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John Ramsey. Another controversy concerned the erection of the haw in the New River 'done to spite the executrix of Sir George Ascue [*sic*] [which] will profit few persons and damage others'.

How did Willis achieve such great material success when medicine had so little to offer? A simple, straightforward explanation cannot be found although several contributory causes may be traced. When treating wealthy patients Willis charged them as high a fee as he judged they could afford. Anthony Wood,²⁸ who was biased against Willis owing to a long-standing family quarrel, stated that the physician hastened his end after undertaking 'a great deal of drudgery . . . in his faculty mostly for lucre sake'. This insinuation has, of course, been refuted by Willis's brother-in-law, John Fell, and by his grandson, Browne Willis. Nevertheless, unprejudiced sources lend support to the view that Willis endeavoured to extract the highest possible fees. His Christ Church contemporary, John Ward, makes frequent references in his *Diary* to Willis's high fees. 'Dr. Willis took 9 or 10 pounds off Ventriss for coming to his wife, though 4 other Drs. would not take a farthing as hee told mee'.²⁹ And a certain Mr. Francis informed Ward that 'Dr. Willis hath rich pieces of plate presented to him as well as fees'.³⁰

Willis was one of many doctors called to treat Lady Anne Conway, daughter of Sir Henry Finch, Recorder of London and Speaker of the House of Commons. In 1651 Anne Finch married Sir Edward Conway (later Earl Conway) of Ragley Park. Lady Conway suffered from severe intractable headaches and, towards the end of her life, had frequent fits. This history of headaches, fits and mystical tendencies, suggests either a diagnosis of temporal lobe epilepsy or, a slowly expanding space-occupying lesion such as meningioma. She spent many fruitless years in search of a cure. 'Lady Conway hath great pains in her head', wrote John Ward,³¹ '(& her sutures open'. In desperation she went to France to have her skull trephined, but the surgeons refused to operate and bled her from the jugulars instead. When orthodox medicine and surgery failed to relieve her symptoms, Lady Conway vainly sought relief from the 'magical' healing powers of Valentine Greatrakes, the Irish stroker.³² John Ward thought that her brother's random medication may have exacerbated her illness. 'Shee came into this miserie,' he wrote,³³ 'by a Brother of hers who was a Traveller and had some skill in physick and chymistrie and tried experiments uppon her'. Ward was referring to Sir John Finch (1626–82) a friend and schoolboy contemporary of Thomas Willis at Mr. Sylvester's Oxford academy. Finch was, in fact, a doctor of medicine of Padua (having been a Professor at Pisa and later became Ambassador to the Grand Duke of Tuscany). Finch was in Padua when Oldenburg informed him of the publication of Willis's *Cerebri Anatome* (1664), and he constantly kept himself informed of the latest medical and scientific achievements, having been elected a Fellow of the Royal Society in 1663. It is probable that Finch recommended Willis to his sister. We do know from a brief entry in Ward's

²⁸ *The Life and Times of Anthony Wood (1623–95)*, ed. Andrew Clark, Oxford, vol. 1, p. 1052.

²⁹ John Ward's *Diary*, vol. 3, p. 617.

³⁰ *Ibid.*, p. 617.

³¹ *Ibid.*, vol. 2, p. 549.

³² According to Ward, Greatrakes charged her £155.

³³ *Ibid.*, vol. 2, pp. 551–52.

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Diary that Willis was called to see Lady Conway, and he charged handsomely for his advice. 'Remember ye prettie storie betwixt my Lord Conway and Dr. Willis', wrote Ward,³⁴ 'about ye twentie pounds in gold'. The full details of this incident are unknown, but it is evident that Willis found Lady Conway a profitable patient. She died in 1679 when her husband was in Ireland, so he arranged for van Helmont to preserve her body in spirits of wine in a coffin with a glass lid so that he could take a last look at her features.

Willis's wealth can be confirmed from his Poll Tax returns; from our knowledge of his extensive estates and by his Will. By stressing Willis's materialism it is not intended to denigrate either his professional ability or his personal qualities, but simply to focus attention on a hitherto neglected facet of his professional life. It was a feature of seventeenth-century medical practice that only a few eminent physicians became wealthy, and Willis happened to be more successful than most of his colleagues. But unlike many of his contemporaries, he put his wealth to good use. He gave free treatment to the sick poor; he paid high wages to his apothecaries and other employees and gave liberally to the Church and the parish poor. It is greatly to his credit, too, that he supported, not only his immediate family, but also less prosperous siblings, including a step-brother.

How did he achieve such pre-eminence? Undoubtedly Willis was a diligent conscientious practitioner, well endowed with commonsense and astute clinical judgment. He had a friendly, conciliatory disposition which enabled him to keep firm and influential friends among two of the most important (and often conflicting) pressure groups in Restoration England. His earliest and closest friends were mostly High Anglican clerics who suffered during the interregnum, but attained high office in Church, State and University at the Restoration. As one of the Oxonian 'Sparkles', Willis was friendly with the leading physicians and scientists, many of whom were busily questioning the validity of traditional beliefs, not only in medicine and science but also in the wider spheres of religion, law and politics. Yet he never appeared to antagonize his traditionalist friends by his scientific interests as, at the Restoration, they immediately helped in his advancement. He was recommended for the Sedleian Chair in Natural Philosophy at Christ Church by the Archbishop of Canterbury, who later introduced him to more fashionable practice in London. Another influential supporter was his brother-in-law, John Fell, Bishop of Oxford and University Vice-Chancellor; and his close friendship with Sir Joseph Williamson also contributed to his professional advancement and the extension of his practice among the rich and influential.

There is, too, some evidence of ambivalence in Willis's therapy. In general, his prescribing was fairly orthodox, although early in his career he had a reputation as a radical exponent of 'chemical' remedies. But he tended to keep details of his preparations secret and employed his own apothecary to prepare them. This aura of secrecy served to stimulate the appetite of his colleagues, many of whom eagerly sought his formulae—particularly the preparation of his well-esteemed spirits of sulphur, recommended in respiratory diseases. Therapeutic secrecy inevitably titivated public curiosity; and although he published many preparations in his *Rational Therapeutics*

³⁴ John Ward's *Diary*, vol. 2, p. 552.

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(the second volume appearing posthumously) he had by that time made his fortune.

Willis's writings also boosted his practice. His best known book is, of course, *Cerebri Anatome* (1664) but it is more likely that his earlier book on fevers, fermentation and the analysis of urine served to enhance his reputation in fever-ridden Restoration Oxford.

These letters also give us a fresh insight into Willis's relation with other eminent Fellows of the Royal Society. Hitherto, it has been assumed that the demands of medical practice prevented Willis from attending meetings of the Royal Society. This is true to some extent. But whereas, in his youth, Willis had been regarded as a versatile scientist, in later life his medical opinion was sought by several eminent Fellows of the Royal Society, including Power, Williamson and Ward. Thus, there was a change of emphasis, and Willis' advice tended to be sought on purely clinical matters rather than on the iatrochemical or anatomical researches of his youth.

A MEDIEVAL GLORIFICATION OF DISEASE AND DEATH

FEW RELIGIOUS poets and mystics of the Middle Ages can rival Jacopone da Todi in glorifying the pursuit of spiritual perfection through domination of earthly passions, freedom from worldly possessions and denial of personal pleasures. No other writer of that period has ever used the imagery of ascetism with such macabre power. Among some hundreds of his 'Laudi Spirituali' there is one of particular interest to medical historians as it yearns for not less than twenty-two different diseases, preceding a painful agony and the final disposal of the human body reduced to ordure:

OF THE INFIRMITIES AND PAINS THAT BROTHER JACOPONE DESIRED FROM EXCESS OF CHARITY

O Lord! of Thy courtesy,
Send me ill-health!
Let me have quartan fever,
The continuous and the tertian,
The double quotidian
With a great hydropsy
May I have toothache,
Headache and belly-ache,
In my stomach sharp pains,
And in my throat angina.
Pain in my eyes and in my flank,
With an abscess in my right side,
Phtisis be added furthermore
And at all times frenzy.
May I have a burning liver,
An enlarged spleen and a swollen belly,
My lungs be plagued
By a great cough and paralysis.
Grant to me fistulas,
With thousands of pustules,
And so many cankers
That I am covered with them.