

# OSLER TRANSMITTED—A STUDY IN HUMANISM\*

by

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THE PLAN of my oration is to consider three questions, by whom is Osler transmitted, by what means and to what end? And because Osler is praised as a humanist, we shall need to examine that chameleon word, on our way to the finish that crowns the work—the moral.

My title, Osler transmitted, well understood by Oslerolators, comes from Osler's classification of authors as Creators, Transmuters and Transmitters when opening the Bodley Shakespeare Exhibition in Oxford on 24 April 1916. He instanced Shakespeare as the world's greatest creator, Francis Bacon as the first of the modern transmuters, and Robert Burton as the last of the great transmitters. 'At the command of Prospero', he began, 'the authors . . . would arrange themselves in three groups', the transmitters (of learning) 'swarming black over Port Meadow and the soft, low-lying Cumnor hills', the creators fitting perhaps on to Harvard President Eliot's seven-foot book shelf.

'The melting-pot of the transmuters has changed the world . . . [they] have given to man his world dominion.' Osler put them into his *Bibliotheca Prima* in his Library Catalogue, 'the essential literature grouped about the men of the first rank, arranged in chronological order'. These transmuters have forged from the designs of the creators the tools of thought and action, from antiquity through the intellectual highlands of seventeenth-century England where dwelt Bacon, Harvey, Willis, Sydenham, Boyle, and on as far as nineteenth-century Röntgen. Twentieth-century wonders have since added more than a handful of fresh transmuters.

## OSLER TRANSMITTERS

Osler was a transmitter. He first transmitted himself to the medical profession of the world through *The Principals and Practice of Medicine*, published in 1892 and for the next twenty-five years the standard student textbook in English and in the many foreign tongues of its translations. He transmitted himself, too, through his pupils in the four universities, McGill, Pennsylvania, Johns Hopkins and Oxford, men and women who helped transform medical practice and education. His own thoughts on medical education still ferment, witness the recent book called *Wm. Osler the Continuing Education*, containing fourteen of his addresses on this subject, each treated to a modern commentary by a different Oslerian. Behind this publication and the foundation of the American Osler Society, both in 1969, fifty years after Osler's death, stands the figure of Wilburt C. Davison, Rhodes Scholar, Osler's friend from 1913–1919, Hopkins graduate, émigré to Duke and its Oslerian inspirer.

For those who knew not Osler, the word comes from the two volumes of Harvey

\* The Second Osler Oration delivered before The Royal College of Physicians of London on 8 July 1971.

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Cushing's biography, which must remain the chief literary source for transmitting Osler. This it certainly was that inspired two idle youths at Saint Bartholomew's Hospital Medical College in 1928 to found The Osler Club of London, with the twin objects of encouraging the study of the history of medicine among medical students and of keeping green the memory of Sir William Osler. But Harvey Cushing, transmitter-in-chief, biographed in his turn by John Fulton, needs a whole oration to himself. The Osler Club of London owes most to Walter Bett, co-founder, seven years Foreign Secretary and eleven years Secretary. A sensitive idealist, talented above most in tongue and pen, Bett founded and refounded our Club, providing a century of successful meetings in a single decade. He served the Club generously and with distinction.

Unbridled enthusiasm under Oslerian inspiration was shown by Louis Carlyle Lyon, an Ealing general practitioner, who seemed to believe that no doctor was a whole man who was not a member of The Osler Club. In the world of the pre-war gathering storm the Club sank into slumber, a sleeping beauty awaiting Prince Charming who duly arrived in 1947 in the form of Carlyle Lyon. Among his many gifts to the Club, and his enthusiasm was not the least of these, is the complete set of editions of Osler's textbook. These are housed in the Wellcome-Osler Room in the Wellcome Institute of the History of Medicine and the Wellcome transmitting of Osler makes a separate story.

Over the water in far-away San Francisco another enthusiast, Dr. Esther Rosencrantz, busied herself with amassing Osleriana. Books, papers, notes, pictures, things by Osler, about Osler, about the Osler entourage, the annotators of Osler, everything that touched Osler found a place, and now this collection rests in the Library of the University of California, San Francisco, in the care of Dr. John de C. B. Saunders, Regents Professor of the History of Medicine. The Osler collections at San Francisco and Osler's own at McGill are places for Oslerian study. And what of the Royal College of Physicians of London?

Osler did not develop a special relationship with this College in his lifetime and he discouraged a move in 1915 to support him for President, partly because he lived in Oxford and he thought the President should live in London. 'It is awfully good of some of the Fellows to think of me', he wrote; and added 'I think the business would bore me to death'. He had, in fact, sent in his resignation from the College during the previous year because Comitia had reprimanded him instead of rallying to his defence when his name had been used, without his knowledge, for an advertisement, and he only withdrew his resignation unwillingly at the President's vehement request.

His lack of warmth towards our College stemmed mainly from his disapproval of the examination system, in those days the College's main concern. Had not its very foundation been aimed at improving and maintaining the highest standard of recruitment and practice? As early as 1873 he deplored the time and money wasted by his Canadian countrymen, 'grinding' to pass English qualifying exams which were neither degrees nor honours, when they should have been attending hospital. Nevertheless he took the L.R.C.P. in that year and the M.R.C.P. in 1878. In another five years, aged thirty-three, he was a Fellow, and as one of the youngest gave the

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Goulstonian Lectures (on 'Malignant Endocarditis') in 1885. In 1906 he devoted his Harveian Oration to 'The Growth of Truth' and, a characteristic gesture, the fee to the binding and putting-in-order of the College's Harvey documents. In 1910 he gave the Lumleian Lectures on 'Angina Pectoris', based on his own long case experience, and but for the War would have given the Fitzpatrick Lectures.

Whatever his feelings about College administration and College policy, he showed a warm and practical friendship for the library by presents of books and by bequeathing a fine case-book of Theodore Turquet de Mayerne and Jenner's holograph record of the Gloucester Medical Society (1785–1793). Among the nineteen books presented were Fracastoro on syphilis (1530), Auenbrugger on percussion (1761) and, always a favourite of his, Beaumont on gastric juice (1833) with the account of observations on Alexis St. Martin's stomach exposed for physiological studies by a shotgun wound.

THOMAS FORREST COTTON

Osler's posthumous place in the College is due to a fellow Canadian, Thomas Forrest Cotton. Cotton was born in 1884 in Cowansville, Province of Quebec, the son of a practising doctor. Trained in Montreal he made a European postgraduate tour and in 1913 came to University College Hospital in London to work in cardiology with Thomas Lewis. Cotton had already studied among his Montreal patients the relationship between the electrocardiogram and the weight of the different chambers of the heart, and the fortunes of war allowed him a full ten years of research into and clinical experience of heart affections. In 1915 with Slade and Lewis he published a paper proving that skin capillaries are capable of contracting actively and he was the first to recognize clubbing of the fingers as a sign that infection had complicated acquired valvular disease (*Heart*, 1921–2, 9, 347). Cotton moved from University College Hospital in 1915 to the Mount Vernon Building of the new Medical Research Committee and later to the Sobraon Military Hospital, Colchester, with a brief spell from February 1918 establishing a depot in France for the treatment of heart cases on the exercise lines elaborated in Colchester.

The War over, he joined as a part-time worker the Department of Clinical Research at University College Hospital that was established by the Rockefeller Foundation under Lewis and T. R. Elliott. He took his M.R.C.P. in 1920 and began to practise at 17 Upper Wimpole Street, the patients mostly handed on by Lewis when a private consultant was needed. In 1924 he was appointed physician at the National Heart Hospital which he served for twenty-five years and he spent the rest of his life as a consulting cardiologist, seeing patients until a month before his death on 25 July 1965 at the age of eighty years. His ashes lie next to Osler's in the Osler Library at McGill. A fuller account of Cotton's life and work has been published by The Osler Club of London.

Cotton was a great doctor rather than a great cardiologist. His patients enjoyed seeing him as much as he enjoyed seeing them, and his ebullient personality radiated cheerfulness even when the prospect was a fatal outcome. One of his patients said 'As long as I know where Dr. Cotton is I don't worry'. A clubbable man with a fund of stories, he was a good listener so that he was well informed on national as well as medical affairs. His smile was famous. He was never out of temper and was ready and

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able to pour oil on troubled waters. Dr. Evan Bedford describes his characteristic attitude while lecturing, holding his glasses in one hand and speaking in a slow deliberate drawl without notes, much as if chatting to a few friends.

While still young he had an opportunity to make some courageous investments, as the result of which he became financially independent and able to bequeath the interest on a large capital sum to the Royal College of Physicians of London. This bequest is intimately connected with William Osler.

Cotton, toiling at research into haemodynamics at Hampstead and Colchester under the influence of Thomas Lewis, had contacts with many of the artists of Cambridge physiology. For a man of his happy temperament and sociability, muscle strips, frogs and rabbits provided poor nourishment. It is no surprise that of all the brilliant scientists and the strong personalities amongst whom he was working, including Allbutt, Mackenzie, Barcroft and Lewis himself, his favourite was an artist, not in the kymograph, the frog or the rabbit, but in men. William Osler became his hero and so remained for the rest of his life.

Cotton was determined that the College should render to Osler the honour that is his due. The rebuilding of the College produced the opportunity. He would persuade the President to name one of the main rooms the Osler Room. At the same time he would endow an Osler Oration to be delivered in alternate years, and he would secure for The Osler Club of London a permanent Office and the use of College premises for the annual dinner and for other meetings.

A letter dated 21 November 1955 reads 'I had a talk with Russell Brain about the Osler Club "Household gods" and he liked the idea of placing them in the College when there is available space in the reconstruction scheme. . . . Incidentally, Dodds was opposed to the idea, a bad precedent, he thought; he of course, did not know Osler, *if he had I think he would have had different views.*'

Lord Platt is the historian of the negotiations during the next ten years and continuing even after Cotton's death that ended with Cotton getting his way. The dining room is the Osler Room, the Osler Club occupies the Thomas Cotton Room where Oslerian relics are kept, and there is an Osler Oration. These are some of the Osler transmitters and their techniques.

Something must be said of Osler's portrait, which Cotton wanted hung in the Osler Room at the College. Dr. Cyril Courville has described the six portraits of Osler, and everyone, including the sitter, agreed that the best was painted in 1908 in Paris by Seymour Thomas, the American artist. A sketch in oils for this portrait now hangs in San Francisco with the Rosencrantz collection. Through Dr. William McMenemy the original was presented by the artist to Christ Church. Unfortunately in their view the portrait lacked artistic merit, so that it was banished to the Radcliffe Science Library where it now graces the staircase. A copy which occupies the place of honour in the Osler Room in the College was made by Joyce Aris in 1960. Seymour Thomas, through his picture, has transmitted 'something of Osler' to posterity.

#### WHAT KIND OF A HUMANIST?

Why should Osler be transmitted? Sir Geoffrey Keynes in the first Osler Oration, like so many who have spoken or written about him, praised him as a physician and

humanist and a source of inspiration to successors. That he was a good physician all agree. Some of the evidence of his continuing power to inspire has already been marshalled. Both these concepts are easy to understand. The questions remain: what is a humanist, in what sense did Osler merit this title, and what is its relevance for the doctors and the medical students of today?

In an address, 'An Image for Osler', I tried to place him in this modern world of Health Service practice, so different from his own. His parsonage upbringing inspired in him a feeling for the unique quality of each person, were he pupil, colleague, friend or patient. Perhaps this is his challenge to the modern age, victims of technology and overpopulation, and the chief lesson to be learned from his life. Certainly this is one of the reasons why Osler is called a humanist; but is that what a humanist really is?

Not always a title of praise, humanist is one of those mellifluous words that once invented live on in different contexts and with different meanings. The *Oxford English Dictionary* tells us that a humanist is 'one of the scholars who at the revival of learning in the fourteenth, fifteenth and sixteenth centuries devoted themselves to the study of the language, literature and antiquities of Rome and afterwards of Greece . . .'. These scholars did not confine themselves to grammar and dictionaries, but pontificated on aesthetics, history and philosophy. They rejoiced as each fresh manuscript came to light in the monasteries of Europe, for they held as the main article of faith that when these ancient texts had all been found and purified men would possess all knowledge. They believed that true and correct knowledge depended upon true and correct language, and that that language was the Latin of Cicero.

Although Osler's use of language was accurate enough, its obvious derivation from the Bible, the liturgy of the Anglican church and Shakespeare, with all of which he had grown up, would not have commended him to Scaliger the undefiled, pedantic Ciceronian. Nor can he rank with Poggio and the purveyors of obscene poetry who disgraced the name of humanist even when account is taken of the literature of Osler's alter ego, Egerton Yorick Davis of Caughnawauga, author of a dubious apocrypha on subjects in his day taboo.

Harvey Cushing, with a fine disregard for the scholars of the fifteenth century, called Osler 'a humanist in the broad sense of the term as a student of human affairs and human nature *rather than of Latin and Greek*'. Welch, going further, praised him as a humanist, 'in the broadest sense'. Sir Frederic Kenyon saw in Osler 'a well-nigh perfect example of the union of science and the humanities'. John Fulton, in a centenary address on Osler as a humanist, wisely leaving the word undefined, used Osler's attitudes as guide lines to a new humanism that should bring closer together science, literature and history, to give humanistic value to the scientific education.

What is there about Osler to justify these views? Osler had an outgoing sympathy and friendship for people and the gift of inspiring devotion. He encouraged in men those thoughts and hopes that they themselves believed to be their highest. He had a kindly regard for the less privileged person but, a man of his time, he had no general sympathy for the poor who are always with us, to excite pity and solicitude but not to be inspirers of social action. He loved books, not only in the ecstasy of bibliomania, but because of the book's message, because of its place in history and not least because of the man who wrote it. For him history was alive, the author was his friend.

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His privileged position in a secure society allowed him to surround himself with books, concentrating on those important in the history of science and of medicine. He truly believed that 'by the historical method alone can many problems in medicine be approached profitably'.

### OSLER'S MANTELPIECE

Three portraits must now engage our attention. Osler's aesthetic sense was not strongly developed, but he liked 'counterfeit presentments', the portrait faces of the men whose books he loved, whose work and thoughts he admired and whom he added to the circle of his friends. On a visit to Oxford in 1894 for the meeting of the British Association for the Advancement of Science the Oslers lunched in his house in the Broad with Sir Henry Acland, then Regius Professor of Medicine. Let Harvey Cushing speak. 'On first entering Acland's library, Osler exclaimed with delight at the panel\* of three portraits—Linacre, Harvey and Sydenham—which stood over the mantel. He made such an ado about it that Mrs. Osler subsequently asked Sir Henry if they might not be copied for him as a birthday present. This was done, and in turn the triumvirate came to adorn the mantel of his own library and office at 1 West Franklin Street [Baltimore] . . . This same panel moreover, was to dominate Osler's library in Oxford . . . '.

Linacre, Harvey and Sydenham—letters, science and practice; teaching, research and service to patients—from these three strands the personal physician weaves his professional career. Management has no portrait but there is a fourth strand, of preventive medicine.

To quote a Chinese traditional belief—

The superior doctor prevents sickness

The mediocre doctor attends to impending sickness

The inferior doctor treats actual sickness.

Osler often talked of prevention, but only since his time has the West fitted sharp teeth into this Chinese paper prophylactic aspiration. Yet prevention of the preventable is vital for a National Health Service that is not to unbalance the economy of a nation. Doctors inferior, mediocre and superior, as many as can be trained, will all be needed for this achievement. They should be like Osler, good physicians; they could be inspired in their day-to-day labours by no better example than his. They, like Osler, can respond to the kind of curiosity about how the human body works that motivated Harvey. And like Osler they can follow Sydenham to the bedside of their patients. What is the lesson to be learned from Linacre, the archetypal humanist?

### *Thomas Linacre*

Many mysteries surround Thomas Linacre, founder in 1518 and first President of our College. His birthday was probably 1460 and his birth-place possibly Canterbury. He entered an unnamed Oxford College about 1480. The College portrait was copied in 1818 by Miller, a College Bedell, from a portrait in the Royal Collections that was first known as 'an old man's head with a letter in his hand' by Holbein. In the eighteenth century it suddenly or gradually became 'the celebrated Linacre by Quintin Matsys'. Whoever it is, it is not Linacre. How ironic for a humanist, exact, meticulous,

\* This now hangs in the drawing room at 13 Norham Gardens.

to be known for these centuries by the portrait of another.

A true likeness exists and there is no mystery about Linacre's record as a humanist. A Fellow of All Souls in 1484, four years later he joined the Embassy of William de Selling, sent by Henry VII to the Pope. Somewhere on the journey—and who can blame him if it were Florence?—he left the party. He is next heard of in Florence a pupil of Poliziano at the Court of Lorenzo the Magnificent. Here the name humanist was coined. Here was gathered that band of intellects who first crystallized the classic concept of humanism from the slow solution of medievalism by the spirit of the renaissance.

An esoteric society the humanists bound themselves to cleanse the ancient texts from the coarse and muddy accretions of the centuries. Their tools were high minds, pure hearts and the enthusiasms engendered by their great expectations. With a perfect grammar of Latin and Greek they would rediscover all knowledge. They followed the language of Cicero and perhaps too his faulty judgment. Always found on the losing side, he joined Pompey against Caesar, and, an error that cost him his head, the Republic against the Triumvirate of Mark Anthony. The humanists believed that man's intellectual future lay in the past. This yearning for a vanished golden age, when men possessed all knowledge, this backward look rivalled and then replaced man's upward look towards Heaven. History, which begins as a record but ends as a process, may have needed this change. Yet, as Sherrington wrote, the medical humanists 'although adding to the cultural prestige of medicine, did little towards refounding either its art or science'.

Linacre's movements in Italy took him to Rome to Hermolaus Barbarus, working in the Vatican Library on Dioscorides, and to Venice where, living in the house of Aldo Manuzio the printer, he helped to produce the Aldine Editio Princeps of Aristotle. It was these literary experiences that turned Linacre's thoughts to medicine, and in 1496 he graduated M.D. of Padua. His was a literary vocation. He returned to England about 1500 learned in Latin and Greek and laden with manuscripts, of which no traces remain, to practise as a physician. The inspiration of his Italian friends and teachers, the compulsion towards perfectionist editing, exactness that was the hallmark of Florence, led to his purging of the texts of Galen.

Physician to Henry VII and VIII and tutor first to Prince Arthur, later to Princess Mary, he began to gather ecclesiastical preferments, an accepted means of livelihood. When in 1520 he was admitted to priests' orders and aged sixty read for the first time in Matthew the Sermon on the Mount, he exclaimed 'Either this is not the Gospel or we are not Christians!' This led him neither to a critical examination of biblical texts nor to a change in his way of life. He is said to have thrown his Testament aside, and to his life's end, in Browning's words, 'with the throttling hands of Death at strife, Ground he at grammar'. He wrote a grammar for his friend Colet's schoolboys at Saint Paul's and *De emendata structura Latini sermonis*, published posthumously by Pynson in 1524, which remained the school textbook for the next fifty years.

Linacre possessed the traditionalist's cast of mind. No doubt he shared the excitement of Lorenzo's circle, the inspiration of men banded together to reach a finite goal. But their discoveries were rediscoveries, their intention was to redraw straight a line of tradition that had gone askew. Linacre's editing suggests the obsessional,

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as also does his unwillingness to publish manuscripts that might still carry imperfections. And it may be this traditionalist, perfectionist impulse that led him to found our College in 1518 to bring order and regulation into the practice of medicine. Clark writes 'he used his judgment and his wealth in the ways which the ruling ideas of his early manhood would have dictated'. In effect his greatest achievement was that with Wolsey's help he extricated the profession of medicine from control by the Church. It is perhaps relevant that Thomas Cromwell, after he had completed the sterilization of the Church, conceived the Civil Service.

In Linacre, the practice of the humanist is seen as bookish rather than humanitarian, intent on the perfection of knowledge through seeking truth in the purified texts of antiquity. Little in common here with Osler.

#### *William Harvey*

William Harvey, in the centre of Osler's mantelpiece, sought truth of another kind. The embodiment of intellectual curiosity he was impelled to ask and to answer questions by observing natural phenomena in action. Then he altered the circumstances and watched the effect. The results of such observation and experiment showed how things happen and the explanation, which is no more than a way of stating the sequence of events, led forward to new ideas and backward to test current doctrine and to be tested against it.

Harvey, like Linacre, had been aroused by the challenge of Italy. As a student in Padua, his teacher of anatomy, Fabricius ab Aquapendente, had left in his mind an irritating thorn. What was the purpose of the valves that could be seen in the veins? Their presence did not fit an ebb and flow of the blood within.

Patient enquiry in animals, dead and living, and in man led him to the discovery that his observations and experiments could only hold the truth if the blood circulated in the body. The beat of the heart moved the blood; what moved Harvey? Is pure intellectual curiosity a sufficient driving force? Bertrand Russell, a mathematician with the instincts of an aristocrat, has confessed that 'to follow scientific intelligence wherever it may lead me had always seemed to me the most imperative of moral precepts for me . . .'. Such sophistication was beyond Harvey, the descendant of Kentish farmers. For him, to use his own words, 'the examination of the bodies of animals has always been my delight, and I have thought that we might thence not only obtain an insight into the lighter mysteries of Nature, but there perceive a kind of image or reflux of the omnipotent Creator himself.' Besides, he had a duty to perform, having been appointed in 1615 the fourth Lumleian lecturer with the task in alternate years of lecturing and demonstrating human anatomy before this College. He recognized that Aristotle and Galen, even in the texts which Linacre had helped to perfect, were not describing the human body as he saw it in dissections of seventeenth-century malefactors. Some statements, false for man, were true for animals, others could be accounted for only if human structure had changed during the intervening years. Respectful though he always remained to authority, Harvey chose to believe his own senses rather than the dogma of another age.

That the concept of the circulation failed to affect the treatment of patients was an early comment. Nor did it alter the theory of disease. When Parliamentary troops raided Whitehall in 1642 Harvey's notebooks recording many years of patient industry



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were lost from his lodgings. Goodall later (1684) made a list of the titles of Harvey's lost works and at its head comes 'A Practice conformable to his Thesis of the Circulation'. We, like Harvey, may 'let slip a sigh or two' at this misfortune, but doubts remain whether such a book would have had a valuable effect on practice. Thomas Willis in 1659 pitted the circulation against the prevailing belief in the four humours, but this only led him further into the iatrochemical theory and practice of Paracelsus.

Harvey's independent mind allowed him accurate vision unobscured by dogma. When he made public what he had seen, he was genuinely surprised at the resulting uproar. No controversialist, he was one of Berenson's 'few men of genius with a gift for seeing' who do not need to be taught how to see. Such men appear in every era and their impact is always disturbing. Fortunate are the ones who live at times when to see new truth and to publish it abroad is not a capital crime.

The scientific freedom of Harvey's day, freedom not allowed either to his contemporary theologians or politicians, owed much to that controversial figure Francis Bacon. He it was who, dealing the final fatal blows to the humanism of Italy, gave a new direction to the minds of men who had lost their bearings in the sixteenth century.

#### *Francis Bacon and the Italian Humanism*

This century, the century of Shakespeare the creator, separates the two chief revolts against humanism as a way of life. The first culminated in the bonfire of the cultural vanities lit by Savonarola in the Piazza della Signoria on the last day of the Florentine Carnival in 1497. A revolutionary, mighty of soul and as narrow of intellect as his little cell in San Marco, he tried to convert men back to theocracy with learning a monkish monopoly. The next year he himself was burnt at the stake.

At the end of the sixteenth century in the second revolt, Francis Bacon inspired by the Bible made an intellectual bonfire of the ancient classical heathen texts to light his 'Pisgah-Sight' of the land of man's dominion over the earth as promised by God to Abraham in the 26th verse of the first Chapter of the Book of Genesis.

The Renaissance, lasting from the birth of Dante to the death of Michelangelo, a period as long as that from the birth of Thomas Sydenham to the death of William Osler, took as its battle cry words with which Protagoras, the sophist of the fifth century B.C., had reassured himself from the total scepticism of contemporary philosophy—'Man is the measure of all things'. In Lorenzo's circle Marsilio Ficino echoed—'Man the focal point of the universe'. Pico della Mirandola, in his oration 'On the dignity of man', makes God address him thus. 'I have placed you in the middle of the world so that you may the more easily see what exists in the world around you. We made you neither celestial nor earthly, neither mortal nor immortal, so that like a despot or a sculptor or painter you might create yourself in whatever form you prefer.'

The same feeling inspired Leonardo's restatement of Vitruvian man, who gives the key to perfect proportion to architects, as Cicero gives the perfect style for literary composition. Anatole France sums up in these words: 'believing that they were thinking through the ancients, they thought for themselves. That is the Renaissance'. Thus gothic man, the docile instrument of God's will, sought to free himself from the bonds of medievalism. Alas! preoccupation with the human condition left man the captive of human nature. Pride in the mind led to arrogance, and the arrogance of the individual turned literary discussion into vituperation. The denial of standards

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replaced literary elegance with what was ribald and obscene. So in the sixteenth century, the humanists, guilty according to Burckhardt of malicious self-conceit and abominable profligacy, were submerged, weighted down with accusations of irreligion in the rising sea of the counter-reformation. The search into antiquity for perfect knowledge had failed; the worship of man had led to corruption; the humanist was in disgrace.

Nevertheless humanism remained a force. Vesalius, whose seminal book *De fabrica* (1543), based on his anatomical researches, has been according to Harvey Cushing, 'more admired and less read than any publication of equal significance in the history of science', was written in a Ciceronian Latin that must have taxed the comprehension of his contemporary doctors. Vesalius' endeavour was to resurrect anatomy and to recapture the spirit and method of Galen, a completely humanist undertaking. By contrast Paracelsus, twenty years his senior, had rebelled against the authorities and publicly burned their texts. The failure of the humanist promise is summarized in the complaint of his disciple van Helmont: 'I, therefore, read Galen's works twice, once Hippocrates, whose aphorisms I knew almost by heart, the whole of Avicenna, and about a total of six hundred Greek, Arabic and modern authors seriously and attentively, and compared and abstracted them. Then I read the collection of my notes and recognised my poverty, and the labours and years I had consumed angered me'. With these words van Helmont dismisses the scientific output of the humanist editors and of the first century of European printing. More than another century was to pass before the medical student was freed from this wordy bondage.

The Renaissance and the humanist movement that was its essential ingredient did leave treasured prizes in art and in architecture, because classical art was based on a truth. That Florentine humanism failed the scientist was the inevitable consequence of the nature and the limitations of classical science, too much philosophy based on too few facts.

To Bacon the solution was obvious. Get rid of hypotheses and get down to work. Man's promised dominion over the Earth would only come from an unbiased study of the Earth and its contents. So Bacon makes wild wordy swipes against the philosophers and the physicians, until not one is left standing, while he seeks 'to destroy utterly the foolish little models, the apish imitations, which have been formed in various systems of philosophy by the fancies of man'. 'These twin goals, human science and human power', he claims, 'come in the end to one'. And he makes the most important of all earthly concerns to be the 'commerce of the mind with things'. Benjamin Farrington praises Bacon for 'his pregnant insight into the connexion between human destiny and human control over nature by the application of science.' When we look back three and a half centuries later along the road travelled with the aid of Bacon's characteristically English compass, pointing to the pragmatic North, we can begin to compare Bacon's new form of forward-looking humanism with the backward-looking humanism of the Italian Renaissance which was for science only a stumbling-block. Perhaps we now have too many facts and too little philosophy.

Bacon has been roughly handled by his critics, including Keynes. Even Osler, who admired his literary skill and classed him high among the transmuters, called him 'a mollusc without a trace of red marrow or red blood'. He himself only claimed that 'he rang the bell that called the other wits together'.

*Thomas Sydenham*

Bacon was certainly the inspiration of Thomas Sydenham, the third of the mantel-piece triumvirate and the embodiment of medical practice. Both lacked respect for authorities and for hypotheses, although, as for most men, dislike of theories meant dislike for the theories of other people. Bacon did respect Hippocrates as a medical artisan and Sydenham returned to the Hippocratic method of study and care of patients. In time Sydenham gathered and reviewed his observations so as to construct generalizations and identify specific diseases. His object was to classify specific diseases as botanists classified plants, an activity that has been followed successfully to the present day and without which Pasteur and Koch could not have found specific causes nor Ehrlich and Fleming specific cures. Sydenham also devised practical methods of treatment which were accepted as valuable innovations, first by his patients, and later by colleagues and successors. His fame spread over Europe and his methods of treatment were taught and practised for the next hundred years.

The scientific curiosity of Harvey and the clinical pragmatism of Sydenham provide keys to the development of medicine in the succeeding centuries. The human mind had first through Renaissance man to find freedom from the restraints of authority. As long as every detail of structure and function, of things animate and things inanimate, on Earth and in the skies, was believed to owe all to the Omnipotent God, the satisfaction of scientific curiosity that sought to substitute for a mystery the evidence of the senses brought the observer into the zone of perilous heresy.

If the humanism of the Renaissance placed man in the centre of the Earth, his Creator was still permitted to inhabit Heaven. When the title-page of Thomas Browne's *Religio Medici* showed the danger into which modern man was tumbling, eyes turned earthwards, his safety was assured from the hand of God in that Heaven. Thomas Browne could keep the book of Nature, open to the eyes of all, separate from the Book of God, the water of Reason separate from the oil of Faith. Osler, who took his copy of the *Religio* with him to the grave, could do likewise, but few since.

Charles Singer credits Galileo with the first separation of the physical from the moral world. Bacon had already excused this important erosion of that unity, so vital to medieval thought, by claiming that 'Natural Philosophy . . . is the loyal handmaid of religion, for religion reveals the will of God, Natural philosophy His Power'. In these words he expressed the balance and he was aware that his attempt to invest man with some of this power might endanger religion through some discovery since 'if secondary causes are unknown, everything will be directly referred to the hand and magic wand of God'. His interpretation of *Genesis* was that it was God's will that men should have this power. On the subject of how men should use this power, he is silent. Unlike Renaissance man Bacon's man is without culture and without history. Although not even Bacon could remove from man his philosophical itch, the need to generalize and to theorize, he did set mankind on its present path, which must now be examined.

THE DOCTOR'S DILEMMA

As man's power increases, the need for guidance becomes more urgent. If man is truly the measure of all things, he should be his own guide. Yet uneasiness grows

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and the fact that many solutions are suggested, shows, if nothing else, that a problem exists. A materialist's solution has been described by Grey Walter in his Eddington Memorial Lecture. Man, he suggests, is a naked animal that is reasonable, artistic, mystical, loquacious, and a gambler, and he likes a good joke. He is hampered by the tyranny of words; 'virtue or happiness or whatever we choose to call "good" is a sort of Phlogiston of mentality'. Man's continuing evolution must result from individual inspiration controlled by impersonal correction and redirection through computer studies. Chance inspiration can be converted into significant design; but who is the programmer?

At the opposite extreme Teilhard de Chardin regards religion and science as the 'twin faces of one and the same complete act of knowledge—the only one which can take in the Past and the Future of Evolution in such a way as to study them, measure them and complete them'. This modern St. Augustine with his Noosphere and omega point would have incensed Bacon as much as would Darwin with his theory of natural selection. But Bacon, dismissing Harvey's circulation along with Gilbert's magnetic force, was one who could never see the trees for the wood.

Whether the time has come to mend the break between the physical and the moral world promoted by Bacon, made by Galileo and widened by Newton can be argued. No help will come from those humanists who are frozen into argument, disputing the human nature of Christ, nor, I think from the agnostic humanists worshipping human reason as the final measure of all things. For what is needed as the counterpart to Bacon's vision of man's dominion over the Earth, is man's dominion over himself. Man is a reasonable animal some of the time, but he is always a great many other kinds of animal as well. Whether a synthesis is now possible and, if it is, by what means, are questions for the philosophers and divines. They are beyond a mere Osler Orator. What he can ask and what his excursion into the meanings of humanism prompts him to ask is what resources has the physician to help him deal with the moral or the ethical elements in his practice and in his researches.

The old infallible guide is believed, incorrectly, to be the Hippocratic Oath. Composed according to Ludwig Edelstein probably in the fourth century B.C. as a manifesto of the Pythagorean Sect, its aim was honourable. Pythagoras wanted to stir up the *conscience* of the individual and in this spirit the physician accepted of his own *free will* the obligations of the Oath. These include relations with his teacher and his patient, and they also invade his own private life. Certain assumptions are implicit in this oath-taking, not the least being a thoughtful intention to obey. The individual is assumed to have both a conscience and a free will. The private behaviour of the professional man is assumed to be of public interest and not something of only private concern to the physician himself. Can modern man accept these assumptions with absolute honesty?

If these assumptions are unacceptable, even if the physician regards such an oath as irrelevant, and even if he neglects his own moral nature and denies his spiritual nature, he is beginning to understand that the machinery of his patient's body, if not of his own, is at the mercy of non-material forces. However named and allowing that their action is mediated through physico-chemical means, these forces cannot be ignored in understanding the whole man, with his own inner conflicts, the conflicts

engaged within his family group, his social group and even within his nation. No one doubts that these conflicts and the stresses that they produce play an aetiological role in disease, just as their resolution is an essential ingredient in treatment. The difficulties besetting the scientific study of these phenomena are great indeed. First comes preoccupation with the material elements in man.

The artists of the Renaissance taught doctors to respect anatomy and themselves engaged in dissection of the human body. To fathom the structure of man was a priority and this study remains so important that the first patient, the first man over whom the medical student still exercises professional control, is the corpse in the dissecting room. The artist soon learned to free himself from this strict discipline though not until the modern age was that disrespect total. Has the time come for doctors to follow artists again? Man can be studied as a machine, but he cannot be treated as a machine. Descartes, who promoted such studies believed that the human machine was governed by a soul, and that herein lay the difference between man and animal. Newton of the Enlightenment travelled further along the mechanistic path. Did not Charles Lamb dismiss him as a 'Fellow who believed nothing unless it was as clear as the three sides of a triangle?' Methods of study which depend on measurement have placed us in danger of believing that truth is only that which is statistically significant. Yet we are surrounded by evidences that this is not the whole of truth and that reason alone cannot control quality or value or guide moral judgment. Even scientific discovery is seldom the product of pure reason. The patient's trust in the doctor is never based on a controlled study of the doctor's therapeutic success.

Linacre, the old-style humanist, looked for perfect knowledge in the past. Harvey searched for scientific truth. Sydenham sought a perfect method of cure for disease. All three regarded their activities as wholly good. None considered that the realization of his aim would produce problems at least as great as any that he set out to solve.

Presumably Bacon's answer would have been to use power according to the will of God. But as John Warrington has pointed out in his introduction to Sir Thomas More's *Utopia* 'Material achievement has sometimes been the prelude to spiritual ruin, and a too ready trust in human reasoning has led to the denial of eternal truths'. The modern world is bursting with the products of material achievement. The modern physician cannot find solutions in seventeenth-century theological terms. A total trust in human reasoning is one of the marks of those who call themselves humanists today. Osler, whilst not a churchman in his adult years, would not have been among their number. He was never that kind of a humanist.

#### OSLER'S HUMANISM AND MEDICAL HISTORY

We have come full circle. 'The commerce of the mind with things' has brought dominion over atoms, and dominion over genes seems near at hand. Powers so great begin to be a little frightening. In the world at large, in the environment with which health demands that man should adjust, ignorance, carelessness and blind allegiance to economic advantage have reversed the roles. Where once man struggled for protection from the environment, now the environment begs for protection against man. In the smaller world contraceptives have given man dominion over birth, prenatal screening and ready abortion over life, organ transplants and artificial dialysis-

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ing machines over death. The ingenuity of the human mind is likely to increase these powers: some value judgments, some morality must govern their use. The road to Hell is paved with good intentions; the intentions are the doctor's, the Hell may be for the patient and his family. Inside the doctor a dichotomy splits the personal physician from the state servant. Every doctor feels morally bound to seek the best treatment for each patient. If and when he decides what this is, the Health Service may lack the human or material resources and it may not always be politically desirable. Choices have to be made, priorities established. To make these choices must remain the doctor's prerogative, a prerogative to be remembered in the design of his education as a doctor and as a man.

Singer believed that 'the world of science may come to be regarded as an evolutionary scheme in which will emerge patterns of value, precisely that type of pattern that was so stoutly repudiated by the materialist philosophers of a previous generation'. Patterns of value have a large content of judgment and of morality. Only an extreme optimist can foresee their spontaneous generation. Harvey's science and Sydenham's practice were made possible by Linacre's humanism. The modern physician needs a new humanism, for human reason worshipping itself, embodied in a doctor trained in technology, lacks a scale by which to measure.

Here is the place for Osler's kind of humanism. He had done more than his share of diminishing the art and strengthening the science of medicine. Yet he was intensely aware of the need for doctors not to become technologists but to remain human practitioners of a most human art. Bacon's ideal man, streamlined to technical efficiency, powerful for good and evil beyond any seventeenth-century dreams, has become a danger to the world about him and to himself. In the evolution of his attitudes he is losing touch with his moral nature. This is beyond the scope of medical education but for his work as a doctor he can be given essential insights by adding some synthesizing subject to his syllabus. Should this be sociology or psychology, philosophy or even political science? Nothing could be better designed to this purpose than the history of medicine, which can gather all together. For this is not an antiquarian's catalogue of dates or inscriptions, but, in Garrison's words, 'the very bone and marrow of cultural history'. For this the planners of medical education will sadly say, there is of course neither the time nor the space.

I return to Cotton, Cotton who endowed the Osler Oration and secured yet another way of transmitting Osler's influence. In his will he left a substantial proportion of his estate to McGill for a Thomas Forrest Cotton Chair in the History of Medicine. How thoroughly Osler would have approved! I suggest to the planners of medical education, as they grimly dispense time and space, that they be very conscious of the choices with which technology burdens doctors. I remind them that one day they too may have to choose, and that their choice in the programme may lie between more pieces of information and attitudes of mind. When that day comes, may Osler the humanist be at their elbow.

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