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INAUGURAL LANGDON-BROWN LECTURE*

BY

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We are assembled this afternoon to honour the memory of Sir Walter Langdon-Brown, and I will do my best to place on record something at least of the contribution he made to medical science and human understanding. I am very grateful to the President and Board of Censors for the honour of being appointed to give this Inaugural Lecture.

Bedford Days

Walter Langdon-Brown was born on August 13, 1870, in the old manse, Bedford, the eldest son of the Reverend Dr. John Brown, who was the sixth direct successor of John Bunyan in the pastorate of Bunyan Meeting, Bedford, and the author of the standard biography of Bunyan. He entered Bedford School in 1879 and there he showed himself very earnest in his work and keenly curious to know. Although a poor classical scholar judged by the school standard of those days, he won the prize for English essay each year, an achievement which confounded his masters, who held that the ability to write good English depended on a knowledge of the classics. By the age of 15 he had developed an enthusiasm for English literature, and two years later he was promoted top of the form. At the age of 18 he won a leaving scholarship and so ended his school days with credit.

His home life was a happy one. His father concerned himself with his schooling and took his son to Bedford School when he went there for the first time for his entrance examination. The boy admired his father; he realized that the headmaster of his school, Dr. J. S. Phillpotts, and his father were the intellectual leaders of the town. His mother was the deciding influence in his career in these early days. She seems to have been somewhat reserved, very firm in character, and puritanic in outlook—using the term “puritanic” in the sense of being extremely strict in morals. Mrs. Brown had complete faith in her eldest son; she watched his every step and did her best to guide him in the path of goodness. But he wanted more than this, an expressed affection, and he found in his sister Florence, later Mrs. J. N. Keynes, who was nine years older than himself and whom he adored, and to whom, to use his own words, he remained devoted throughout his life. With his brothers, Harold and Kenneth, he was lifelong friends. He was strong and constant in affection.

*Read, owing to the death of Dr. Evans on August 30, by the President of the Royal College of Physicians of London at the College on October 30, 1951.

Cambridge Days

Langdon-Brown entered St. John's College, Cambridge, with a junior scholarship in 1889. He arrived unsure of himself and diffident, but he soon made friends and became engrossed in his work. In his third year he found himself. He was by nature ambitious; his teachers gave him the encouragement and appreciation which were his greatest need at that time, and now he became conscious of a firmer grip on things and felt he was beginning to approach the first-class academic standard.

He has left us a beautiful vignette of an occasion in his life at St. John's College. “We take our places in hall along the long Jacobean benches at the equally long and ancient tables. The bell rings in the turret. The butler hands the Latin grace to the scholar of the week as he advances to the dais. We rise; the bell ceases; silence. ‘Benedic, Domine, nos et dona tua,’ he begins, ‘Bless us, O Lord, and these thy gifts.’ So has the grace run these four hundred years since the Lady Margaret, whose portrait hangs in the place of honour, founded the College. So it ran in the days when the great men whose portraits adorn the walls were undergraduates, became distinguished, died, and faded into memories more or less distinct. So it will run when we in our turn give place to others. What a deep sense of continuity it gives; of life that transcends the individual.”

Langdon-Brown completed his career at Cambridge with distinction by gaining a first-class in both parts of the Natural Sciences Tripos. Subsequently he maintained the high standard which he had set himself by being bracketed first in surgery and midwifery and in being second in medicine in the third M.B. examination: later he was awarded the Horton-Smith Prize for the best thesis for the degree of M.D., University of Cambridge.

St. Bartholomew's Hospital

When Langdon-Brown delivered the Annual Harveian Oration in this College on October 19, 1936, he chose for his subject “The Background to Harvey.” And so it is in keeping with his own approach to biography to speak about his background at St. Bartholomew's Hospital, more particularly in respect of its atmosphere of learning, to which he himself so greatly contributed.

Robert Bridges, later Poet Laureate, had left the hospital in 1881, 13 years before Langdon-Brown came

to St. Bartholomew's. It is appropriate, however, to mention his name, because Langdon-Brown was enthralled by his great work, *The Testament of Beauty*, and he chose "Robert Bridges: The Poet of Evolution," as the theme for his inaugural address to the Abernethian Society on November 3, 1931.

Langdon-Brown entered St. Bartholomew's Hospital in 1894 with the senior open entrance scholarship. In the same year Sir James Paget gave the inaugural address at the 100th session of the Abernethian Society. After qualification in 1896 he was appointed house-physician to Dr. Samuel Gee, a man of remarkable talent, whose mind was cast in the same mould as that of the seventeenth-century philosopher Thomas Hobbes, whose works he often quoted. This was the age of materialism at Bart's; reason disputed empiricism, and logic prepared the ground for the incursion of science into medicine. Norman Moore was assistant physician, later full physician, and, finally, President of this College during the years of Langdon-Brown's life at St. Bartholomew's Hospital. In addition to his knowledge of biology and natural history, Norman Moore was a scholar of Irish Gaelic. In those days the notes of a patient's case were pinned on a board which was hung on the wall at the head of the bed for everyone to see, and Norman Moore would sometimes write a very private note on the patient in the ancient language of Erse, or a less private record was made in Latin, such as the diagnosis "valetudo conquassata" (literally translated, "health severely shattered"), meaning much the same as anxiety neurosis or battle fatigue. But his name in the future will be remembered by his *History of the Study of Medicine* in the British Isles, and by his editing of the Middle English translation of *Liber Fundacionis*, a work composed by an Augustinian canon in the Priory of St. Bartholomew in West Smithfield in the reign of King Henry II; and especially will he be remembered by his great history of St. Bartholomew's Hospital.

This literary tradition was carried on by Langdon-Brown's contemporaries. Sir D'Arcy Power shared Sir Norman Moore's interest in historical research in his *Life of William Harvey*, published in 1897, while another of his colleagues, Sir Percival Horton-Smith Hartley, in conjunction with Harold Aldridge, has written the *Life of Johannes de Mirfeld*, who was one of the Clerks of the Priory of St. Bartholomew in Smithfield in the latter half of the fourteenth century, when Richard II was king. The latest contribution to historical research emanating from the hospital is a collection of *Essays in the History of Medicine* by the late George Gask, and no doubt Langdon-Brown heard some of these lectures delivered.

Sir Archibald Garrod introduced biochemistry to clinical medicine. He walked to and fro between his wards and Dr. Hurtley's chemical laboratory: to Garrod the wards and laboratory were as much one as the two sides of a penny. He was elected a Fellow of the Royal Society in recognition of his work on urinary pigment and his discovery and description of *Inborn Errors of Metabolism*, which was first published in book form in 1909; the second edition was published in 1923, when he was regius professor of medicine in the University of Oxford. Administrative capacity was represented by Sir Wilmot Herringham and by Sir Holburt Waring, who is still with us, both of whom in their time were vice-chancellors of the University of London. Herringham was a great orator; Waring was in the forefront of surgical practice.

Langdon-Brown had a wide education in clinical medicine. He served as clinical assistant in the department of diseases of the ear, nose, and throat, and then as external midwifery assistant. When he had completed his term as house-physician to Dr. Gee he became senior resident medical officer to the Metropolitan Hospital; two years later, in 1900, he was appointed assistant physician and pathologist to that hospital, and in 1906 became full physician. Meanwhile his progress at St. Bartholomew's Hospital was slow, but it provided him with ample opportunity for learning and clinical experience, first as casualty physician in 1900, then as junior demonstrator of practical medicine three years later, and, again three years later, he was appointed medical registrar and demonstrator of morbid anatomy. It was not until 1913, at the age of 43, that he was elected assistant physician to St. Bartholomew's Hospital. It was a long and arduous climb to the Staff at Bart's in those days. He became full physician in 1924 at the age of 54. Meanwhile he had already made his name and fame by his work on war nephritis, undertaken at the request of the Medical Research Council and the Director-General of the Army Medical Service in 1915, and his Croonian Lectures, delivered in this College in 1918. That his name was known outside this island of ours is shown by his having been invited to lecture at the American Academy of Medicine in New York in 1929. It was very hard on him that on account of the appointment of a full-time professor of medicine at Bart's in 1920 he was not elected full physician in that year. But all this time he was teaching and working with great energy and perseverance. His book *Physiological Principles in Treatment* appeared in successive editions, and in 1927 he published his book on endocrinology for the use of general practitioners, *The Endocrines in General Medicine*, in which he gave an account of the endocrine system in relation to the autonomic nervous system.

Physiology

Langdon-Brown brought an entirely new outlook on clinical medicine to this seat of learning. He was a physiologist at heart and kept himself informed on advances in this subject throughout his active professional life.

During his early years of clinical practice he taught physiology, first as junior demonstrator in 1899 and then as demonstrator of physiology in 1902, an appointment which he held for a number of years. And so his first contribution to clinical medicine was the interpretation of the signs and symptoms of disease in terms of physiological reactions; at the same time he began to put therapeutics, or the treatment of disease, on a scientific as opposed to an empirical basis. In October, 1908, the first edition of his *Physiological Principles in Treatment* was published. The book was written to acquaint the busy practitioner with the leading changes in physiology, so that he might deduce from it the points on which his clinical conceptions should be modified. He was helped by Dr. Reginald Hilton in the preparation of the eighth edition, published in December, 1942, when the book had already been 34 years in circulation, in itself a notable indication of its value.

His interest in physiology was aroused by his teachers, and by Gaskell in particular. His interest in endocrinology, the ductless glands, had its origin in his own work and observation. One Easter he stayed

up at Cambridge, by special permission, to study embryology. He incubated hens' eggs, stopping their growth at different stages and cutting serial sections of the embryo, and then studying the sections under the microscope and drawing what he saw. He worked from dawn to dusk; in later years he wrote of his excitement, in those days, of seeing the brain, the backbone, the eyes, and the heart forming themselves before his eyes. He wrote: "I could hardly tear myself away from this self-imposed task. I can still recall the thrill as I saw, what had not then been described, the pituitary gland arising like a nephridium, which according to a theory I was already formulating it ought to do. I remember drawing a diagram on the laboratory bench before a group of fellow students to illustrate the idea of the evolution of the ductless glands (whose functions were then quite unknown) which was surging in my brain. It is an essential part of my pleasure in the work that I am now doing that it links directly with the happy labours of those days." What a vivid description this is of his own discovery of one of the "hidden mysteries of nature and science."

The Sympathetic Nervous System

Langdon-Brown was much influenced by Gaskell, whom he has described as "one of the greatest minds that ever adorned British physiology," and he said that an account of the sympathetic nervous system written before Gaskell was like writing a description of the circulation before Harvey. Speaking metaphorically, in those days more than one chapter was being written in the new *Book of Physiology*, and the contributors were collected by Michael Foster, who had a genius for choosing his men. Gaskell wrote the first chapter by his researches on the innervation of the heart; he laid the foundation on which modern cardiology is built. In the second chapter he showed that the nerve fibres which flowed from the spinal cord into the sympathetic chain were of smaller calibre than the nerves to the skeletal muscles, and by this standard he was able to show that there were fibres with visceral functions in the cranial and sacral nerves. J. N. Langley, with much help from Hugh K. Anderson, showed by his nicotine method that these small medullated fibres ended round cells in one or more sympathetic nuclei from which a new non-medullated fibre passed to its ultimate destination. Langley gave us a plan of what he called the autonomic nervous system, and he showed that it consisted of two parts—namely, the sympathetic and the parasympathetic—while Gaskell showed that when these two parts were distributed to the same structure their function was antagonistic.

Langdon-Brown was interested at once in the close connexion of the sympathetic nervous system with the ductless glands, and in his Croonian Lectures in 1919 he quotes Gaskell verbatim in his account of the evolution of the suprarenal glands. It is a curious story of chromaffin cells, which appear to originate in the central nervous system, and in the segmented worms they remain there. In evolution the sympathetic cells emigrate from the central nervous system into outlying nuclei accompanied by the chromaffin cells. Gaskell wrote: "The evidence of embryology and comparative anatomy thus points strongly to the conclusion that the sympathetic nervous system arose from the nerve cells containing adrenalin . . . and that when these cells left the central nervous system to become peripheral they

left not as single cells but as two separate cells, one of which contained all the adrenalin and formed the chromaffin system, and the other the nerve cells of the sympathetic system of the vertebrate."

Since then it may be that a comparable phenomenon has been discovered in regard to two groups of nerve cells in the hypothalamus—namely, the supra-optic and paraventricular nuclei. These two nuclei are a single mass of cells in submammalian vertebrates; in man they are distinct, but they have the same peculiar cytological characters. It has been shown by anatomists that these nerve cells may contain droplets of colloidal material in their cytoplasm. It seems that these small droplets may later coalesce into larger globules, which are extruded into the intercellular ground substance and taken up into blood vessels. It is noted that these two nuclei are permeated by an exceedingly rich capillary network, which, says Le Gros Clark, from whom this description is taken, suggests a high grade of metabolic activity. This is not yet proved physiologically, but the comparison with the origin of the cells of the suprarenal medulla from nerve cells in the spinal cord is evident, and so knowledge advances and the ball passes to and fro between physiologist and anatomist, and now in neuropsychiatry the biochemists and physicists are making their contribution to the game.

It was the close connexion of the hypothalamus with the pituitary and the importance of the pituitary gland in its effect on the function of other ductless glands that led Langdon-Brown to name the pituitary gland the "leader of the endocrine orchestra"; and in all his teaching as a clinician in later years he realized the close integration of function of the sympathetic nervous system and the ductless glands.

Psychology

The advance in our understanding of functional disorders has been so rapid in recent years that it is difficult to realize the darkness and fog that enveloped the subject of psychoneurosis 40 years ago, when Langdon-Brown began to apply his knowledge of the autonomic nervous system and ductless glands to the elucidation of neurotic behaviour. At that time psychologists were regarded as cranks and the average reaction to psychoneurosis was one of antipathy or disdain. I can illustrate this attitude of mind from my own experience in the examination for membership of this College in 1914, before the outbreak of war. As I entered the room for the viva voce examination I found the President sitting at the head of a large table and at the same table were the members of the Board of Censors. I was invited to take an empty chair on the President's right. The first and, as it turned out to be, the only question put to me by this distinguished company of Fellows of the College was asked by the President as soon as I had taken my seat: "Tell me, Dr. Evans, what diagnosis you would make in the case of a woman who had had her appendix removed for abdominal pain and later her gall-bladder removed for the same reason, and who during the next few years had no less than four abdominal operations for the division of adhesions?" After I had made a number of diagnoses, all of which I feared were futile, the President, seeing that I was nonplussed, said to me in a kindly way, "You have a lot to learn, Dr. Evans. This woman was suffering from Cheirourgophilia. It is a common complaint, Dr. Evans."

There were several reasons that led Langdon-Brown to develop an interest in psychology. He was mindful of Hippocrates' injunction to examine the whole of the patient. He realized that this required more than the simple physical examination that he had been taught by Dr. Gee, and that it involved the consideration of the patient's whole attitude to life, both past and present, and his adjustment to his environment. In the second place, he was influenced by his friend Dr. W. H. R. Rivers, who was brought from St. Bartholomew's to Cambridge by Michael Foster in 1893 to lecture on the physiology of the special senses. Rivers was a member of the expedition to the Torres Straits organized by Dr. A. C. Haddon, and Langdon-Brown remarks that the party went out as physiologists and returned psychologists. Here, then, was a man of high scientific reputation and unimpeachable integrity who found his true mission in life in the treatment of soldiers suffering from war neuroses. In the third place, Langdon-Brown had had experience of war as senior physician in the Imperial Yeomanry Hospital, Pretoria, in the South African War. But the first world war was different. Much larger numbers were involved and the hardships and terrors of war were greater, and this brought him to realize the importance of emotional disturbance in causing physical ills. He found that physiological principles and facts could be as well applied to war neuroses and later to civilian neuroses as to the physical ills which he had chiefly studied up to date.

In his inaugural lecture as regius professor of physic in the University of Cambridge, Langdon-Brown gives a bird's-eye view of the relation of emotion to organ function, and explains in simple language how emotional stress may cause symptoms of disease. The following illustrates his approach to one aspect of this large subject. "When under conditions of modern life emotion is dissociated from the movement it should evoke under more primitive conditions, the sympathetic disturbance may continue. The mobilized army which is not allowed to fight the enemy becomes a danger to its own country." The same notion must have been in the mind of William Blake when he wrote: "Better murder an infant in its cradle than nurse unacted desires." Then, expanding his thesis, Langdon-Brown continued: "Nervous impulses tend to run along accustomed channels. The exciting cause may long have passed from the realm of consciousness, but its effects may continue. Designed for an intensive preparation for action or defence, the sympathetic response may be dissociated, perverted, or prolonged, with serious effects on the individual. The pressure of the blood or its sugar content may be kept too high, the digestive processes in stomach or intestines may be inhibited, from purely emotional causes, yet ultimately leading to organic changes in structure." This is an interesting passage because it introduces two ideas—namely, organ habit and functional disorder as the cause of change in structure.

In 1938, when President of the Medical Society of Individual Psychology of London, Langdon-Brown gave his own answer to how he became interested in medical psychology. In this address he dealt with Adler's contribution to general medicine. He first referred to Adler as having linked psychoneuroses with organ inferiority, thereby enabling orthodox medicine to join hands amicably with the new psychology; and he said that Adler's main theses had been the early formation of a style of

life, the significance of each child's position in the family hierarchy, the importance of knowing the goal towards which the individual is consciously or unconsciously striving, and the vital necessity for co-operation with others. From Adler, Langdon-Brown passed to Jung, attracted by Jung's wider and more far-reaching conception of the human mind.

Teaching

Langdon-Brown was a great teacher not only of clinical medicine to students within the walls of St. Bartholomew's Hospital but also to the world at large in many lectures and addresses that he gave to important medical, scientific, and literary societies.

Professor V. H. Mottram, who has had forty years' experience of teaching physiology—a Cambridge man and well known to many who are here to-day—in a broadcast talk on education given three years ago provided an insight into the make-up of a good teacher or educator. What he said applies so truly to Langdon-Brown that I will quote some of his words: "It is axiomatic," said Mottram, "that education should set out to develop those qualities which have enabled man to evolve from and dominate the kingdoms of plants and animals. At the head of the list are the faculties which we can loosely term spiritual: awe in the presence of the sublime; reverence for the true, the good, and the beautiful; worship of the numinous (which means of or belonging to the deity, the presiding power or spirit). . . . Next comes the capacity for making use of the stored wisdom of the past, oral and written. This needs language. . . . No one incapable of the accurate use of language can think; accurate language—English—spoken, written, or declaimed, prose or poetry."

Langdon-Brown had all this, and it was born in him. Both in discourse and in writing he made frequent reference to the spiritual component of human nature, and in all that is and is to be he realized the handiwork of the Great Architect of the Universe. Thus when as an undergraduate he embarked on the study of embryology he was completely thrilled. For him it was "a lovely science." In his own words, "Wonderful beyond anything I had hitherto learned was the marvellous energy of the fertilized cell; the Unseen Potter moulding the growing protoplasm deftly according to a preconceived plan." Of the three great experimental psychologists, Freud, Adler, and Jung, he was most in sympathy with Jung, because, as he said, "Jung of all men is best qualified to reconcile life with spiritual values." And he went on to say, "Man is more than a bundle of conditioned reflexes and behaviourism, and can never remain satisfied with psychology without the psyche. It has been suggested that it would be well to study the simpler Adlerian philosophy of social co-operation on the way to the study of Jung, for with Jung lies the future of psychology that can best explain and meet the deepest emotional needs." It was this feeling for the sublime which took him away from the material grandeur of Roman antiquities and led him to find a deeper satisfaction in Greek art and mythology.

In the nineteen-thirties his visits to Rome ceased. He said that he had come to dislike the fact that the most striking landmarks of the city were memorials to the individual. That the Roman, hating the transience of life, demanded some projection of the ego. Thereafter he spent more time in Athens and in the Greek islands.

finding far greater appeal in the reticence of the sceptical and modest Greeks—with their “whispers of a sigh to greatness.” In Grecian art he found his ideal of created beauty, and his description of a statue, one of several dredged up off the coast of Greece, which he watched being carefully cleaned in the Museum of Athens, records his feelings on this occasion. “It was an exquisitely beautiful figure of a boy, perfect in every respect except for the palm of his left hand. His right arm was uplifted and he appeared to be gazing with wonder and delight at something which has now vanished, but once rested on that left hand. It has been suggested that this was a lyre which the boy had struck and that he stood enchanted by the music he had created. . . . For me,” he wrote, “it was a symbol of the recurrent wonder and delight that different generations have experienced on discovering again the treasures of the Greek mind which more than once have sunk beneath a sea of indifference and neglect.” I have the permission of Freda Langdon-Brown to quote from a letter she wrote to me that these her husband’s words “speak so clearly to me of him and his love of beauty ; and of that enchanted and enchanting quality of awe and wonder which was his to hold and share to the end of his life.”

Accurate Use of Words

As to the second qualification for a lecturer or educator, Langdon-Brown was equally well endowed. An accurate use of words is of course essential to clear thinking ; this is brought home to us by the Greek word *λογος*, which means both a word—that is, the outward form by which an inward thought is expressed—and the inward thought itself. Thus *λογος* comprehends both *ratio* and *oratio* in the Latin language. But the word, the spoken or the written word, means much more than this to us. It expresses at once both thought and feeling, it expresses the whole range of feeling, mood, emotion, and affect—affect means mental disposition, which is the essential basis of personality. And so for Langdon-Brown the accurate use of words was an expression of absolute sincerity and truth, which were hall-marks of his character, and I can illustrate this by a simple conversation as we walked to his home in Cavendish Square after a meeting. It was in 1935, soon after Hitler had arrived on the world’s stage. I asked Langdon-Brown what he thought of Hitler. His answer was, “I do not trust him; he does not speak the truth. I believe the words in the Bible, ‘In the beginning was the word, and the word was with God, and the word was God. The same was in the beginning with God.’ You can’t get away from that,” he added, meaning the sanctity of the spoken word and the sacrilege of lying.

His literary education began when he was very young. He described his father’s study as an enchanted room, lined to the ceiling with books: volumes of old topographical prints his father had collected ; editions of *Pilgrim’s Progress* in sixty languages ; Bunyan’s cabinet, walking-stick, and mug ; Gibbons’s *Decline and Fall* ; Smith’s *Dictionary of Greek and Roman Biography and Mythology* ; Chaucer’s and Shakespeare’s works. Here he sat, his legs too short to reach the ground, a reading-desk in front of him, reading while his father wrote. It recalls Wordsworth’s lines :

“And books are yours
Within whose silent chambers treasure lies
Preserved from age to age.”

Langdon-Brown had a receptive mind and a retentive memory. He had great knowledge and a store of wisdom to impart. He did me the honour of asking me to collaborate with him in writing the sections on diseases of the kidney and vasomotor neuroses in Price’s *Text-book of Medicine*, the first edition of which was published in 1922. We continued together in this work, through seven editions, until he died. We used to work together after dinner at night. We worked late. He never seemed to tire, and it was remarkable that he always had the words and phrases immediately at hand to express what was in his mind, whether for construction of something new or alteration of what was already written. Dr. Hilton has told me that he had the same experience of his quick brain and facility of expression when they worked together on the later new editions of the *Physiological Principles in Treatment*. It is fitting for me here to pay tribute to the generosity of his character, his patience and forbearance, and his great kindness.

Contribution to Literature

Langdon-Brown’s contribution to English literature is his book entitled *Thus We Are Men*. It is largely a collection of lectures and addresses which he gave at various times, and it is dedicated to his wife (“my collaborator”). In this book the reader will find an account of some viewpoints of modern psychology and the author’s own experience of their application to the practice of clinical medicine. It is a wonderful book to read: it reflects so much of a highly cultured mind, and it contains a number of the author’s original ideas. One of these concerns the psychology of authorship, for it was Langdon-Brown’s idea that literary criticism would be a more living thing if it were realized that, in works of imagination, a revelation of the working of the author’s unconscious mind is to be found in his writings, although, as he remarks, it is not permissible to treat the writings of an author as if they were strictly autobiographical. He was much interested in Barrie’s works, and in a chapter entitled “Myth, Phantasy, and Mary Rose” he interprets the whole genesis of Peter Pan in terms of a mother-fixation complex. This is Barrie. If, then, Sir Walter Langdon-Brown’s thesis is applied to his own writings, the reader is arrested by his account of his meeting Barrie. “The only time I had the pleasure of meeting Barrie,” he wrote, “I mentioned the idea that Lob was Peter Pan grown old. Barrie replied, ‘That’s good ; how did you find it out ?’ I replied, ‘My wife told me.’ ‘She must be a remarkable woman,’ was his comment.” And so he lets his conversation with Barrie tell the world that the theme of this chapter was given him by his collaborator.

Thus We Are Men was published in 1938. An American writer, Dr. Alvarez, came across this book ten years later and published a review of it in *Gastroenterology*. He wrote of its being “full of inspiration,” and of its author he said: “It is immediately evident that he was not only a master of the practice of medicine but also one of the best educated of the world’s physicians.”

In reading the works of Langdon-Brown one is repeatedly impressed by the soundness of his views and his anticipation of advancing knowledge. I will give two illustrations in support of this statement. In the first Suckling Memorial Lecture, delivered at University College Hospital in 1939, the subject of which was visceral symptoms in emotional states, Sir Walter Langdon-Brown discussed the connexion between

emotional expression and the visceral nervous system. "Mental activity," he said, "naturally largely depends on the stream of afferent impulses pouring in on all sides." He then quoted from Professor Michael Foster as follows: "We can hardly doubt but that volitional and other psychical processes would soon come to a standstill and consciousness finish" in the absence of these afferent impulses. Michael Foster had quoted a remarkable case of a man who was blind in one eye, who was totally deaf, and who had general cutaneous anaesthesia. His sole remaining tie with the outside world was through the other eye, and if this were closed he simply went to sleep.

In 1947, in his Lumleian Lectures, Dr. Purdon Martin reported a comparable case of a woman aged 56 who suffered a cerebral haemorrhage at the level of the middle of the pons which spread horizontally and involved the whole median fillet on either side and the adjacent lateral fillets and other auditory structures, as well as the sixth nuclei and the right facial nerve. This lesion had been diagnosed correctly during life. When one median fillet was involved the woman was drowsy; when the other side became involved it was impossible to keep her awake. She had become deaf too, and so, writes Dr. Martin when she closed her eyes all her channels of reception of impressions from without were interrupted (except smell, which was not tested), and in these circumstances she fell into a deep sleep. And Dr. Martin asks, "Is it awareness of the body that is essential for consciousness?" and he concludes that if nearly all the sensory pathways are interrupted the activity of the cortex is greatly depressed or is abolished.

Langdon-Brown more than once refers in his writings to the difference in relation of cortical *vis-à-vis* hypothalamic activity in most animals as compared with man. He writes: "Man is essentially an image maker: it is his human prerogative. Thus in most animals, who act from what we call instinct, action follows on stimulation of the perception mechanism with almost chemical swiftness and certainty; in man the nervous system is more complicated; perception is not instantly transformed into reaction; there seems to be an interval for choice."

Recent anatomical research has perhaps found the nervous pathway that makes it possible, as Langdon-Brown said, for the human being to think again. Nerve impulses from most, if not all, of the cerebral cortex connect with nerve cells in the temporal lobe. They are relayed from there to a subcortical centre called the hippocampus; it is a massed battery of cells whose fibres travel together in a well-defined bundle to the hypothalamus, the head ganglion or centre of the involuntary nervous system. In most animals nerve impulses from the cortex reaching the head ganglion or hypothalamus in this way would lead to an explosion of involuntary activity such as rage, or fight or flight. But in man and the higher mammals these involuntary mechanisms are not necessarily stimulated to activity by these nerve impulses, and it may be because they are immediately relayed back to the cortex—that is, to the frontal lobe. Professor Le Gros Clark in his contribution to *Perspectives in Neuropsychiatry*, edited by Dr. Derek Richter, asks: "Can this possibly provide the basis for the development of the more intelligent type of behaviour involving more continuous cortical processes and characterized by rational deliberation, rather than the instinctive type of behaviour in which the first

results of cortical activity are immediately expanded in impulsive actions of a purely emotional character?"

The anatomical connexions of the prefrontal cerebral cortex with the hypothalamus had occurred to Langdon-Brown already thirteen years before as the possible pathway along which psychical activity expressed itself in physical symptoms.

Royal College of Physicians

Langdon-Brown made valuable contributions to the life and work of this College. He was elected a Fellow of the College in 1908, and gave the Croonian Lectures entitled "The Role of the Sympathetic Nervous System in Disease" in 1918 and the Harveian Oration in 1936. It was in 1931 that he served as Senior Censor, and it seemed to many Fellows of the College that he might in due course be elected our President.

Any attempt to portray the life and character of Langdon-Brown would be incomplete without a reference to an unhappy time in his life which lasted over a period of years. There is, I feel, some truth in the idea of salvation through suffering, in the idea that tribulation brings at least a sensation of the power of God and perhaps a better understanding of His purpose. It has seemed to me that the text on Rahere's tomb in the church of St. Bartholomew the Great actually applies to these years in the life of Langdon-Brown; the words are those of the third verse of the 51st chapter of the Book of the Prophet Isaiah, "For the Lord shall comfort Zion: he will comfort all her waste places; and he will make her wilderness like Eden, and her desert like the garden of the Lord." In due course joy and gladness came again into the life of Langdon-Brown, and he pursued his objectives with renewed vigour and enthusiasm.

Regius Professor

In the summer of 1932 the Prime Minister offered Langdon-Brown the chair of regius professor of physic at Cambridge University. This appointment brought him great happiness as well as honour, because it meant his return to his "beloved alma mater," his affectionate term for Cambridge. It is one thing to be appointed regius professor of physic and it quite another to find a way into the social life of the university and so become one of those who belong to the place. The door was opened to him by Corpus Christi College, who offered him a professorial fellowship. This invitation was made in an exceptional way, for, so far as is known, he is the only Fellow of the College who has been thus invited "unseen by the Fellows of the College." He found great social interest here in dining with the Fellows, his room in the College and the Master's Lodge always hospitably open both to him and to his wife. He received the honour of knighthood in 1935, and on February 20 Sir Walter Langdon-Brown received the accolade from his Majesty King George V.

The years of his appointment as regius professor were fully occupied with work of a varied kind. His inaugural lecture as regius professor, of which chair he was the twentieth holder in 392 years, was of the highest order. He gave a number of lectures and addresses in addition to set courses of lectures for the university. He was an examiner at Cardiff and Sheffield Universities, and in the National University of Ireland, and he conducted the Cambridge M.B. examination in medicine. In 1935 his retirement under the age limit for

professors came all too soon. He left Cambridge with deep regret, full of gratitude for the kindness and friendship he had received from Corpus Christi College and from that College of his young enthusiasm, St. John's College, whence came the invitation which he received and accepted with great pride—to give the Linacre lecture in 1941. He returned to Cambridge for the last years of his life, and he was occupied till the end in writing *Some Chapters in Cambridge Medical History*, published in 1946 by the University Press.

Conclusion

Sir Walter Langdon-Brown died in 1946 at the age of 76 honoured by all and loved by his friends, and holding the devoted affection of the nearest and dearest to him. He used to speak with pleasure and satisfaction of the survival of the institutions, of his beloved university in particular, throughout future generations. I would like to speak of the survival of his life's work, the central thesis of which is best defined in his own words. "As we are animals we conform to biological laws. Our future evolution physically is improbable and mentally unlikely. Therefore only a psychological evolution remains. This necessitates co-operation, not merely instinctive as with bees and ants, but intelligent and voluntary. Now we, like all animals, carry with us vestigial traces of our past ancestry, not least in our mental processes. To develop psychologically we must understand ourselves, and it should help us to do so if we can find ways to investigate those hidden depths in our minds from which we draw our impulses."

Psychology has for some years been chiefly concerned in looking back, and it has been a preoccupation of psychologists to search out the origin of thoughts and feelings. This has been a contribution to knowledge as was Charles Darwin's work on the origin of the species. Langdon-Brown asks us to look forward and to find ways—new ways—to investigate the hidden depths of the human mind. Godwin Baynes, speaking of a moral act or response being invariably individual in origin, said, "A moral feeling can be imparted to a community, but its source is in the solitary individual soul." The same holds good for original ideas; they too have their origin in the individual mind. The work and teaching of Sir Walter Langdon-Brown was spread on so large a canvas that it must be viewed from a distance to be seen as a whole. His contribution to medicine was no discovery of factual knowledge, nor was it the presentation of some ideas; it was a wide conception which has given a fresh inspiration and a new direction to the understanding of the human mind.

According to the Swedish International Press Bureau the Swedish Medical Association has agreed on a *Codex Ethicus Medicorum* embodying 15 rules of ethics for medical practitioners in Sweden. Simultaneously a new set of rules for medical specialists has been agreed upon. These two briefs of rules aim at maintaining the high standard of Swedish physicians. They contain instructions on the relationship between the doctor and his patient, and clearly define the duty of the physician towards the preservation of human life, professional secrecy and ethical points about monetary reward, publicity, etc. It is stressed specially that a physician should refrain from advertising himself or his work in an importunate or flagrant way and not draw inappropriate attention to his person when giving information to the Press.

GENERALIZED OSTEOARTHRITIS AND HEBERDEN'S NODES

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Osteoarthritis is usually considered to result from degenerative changes in the articular cartilage and other joint structures which occur to some extent in most individuals with advancing age, but which may occur prematurely in joints subjected to abnormal wear and tear from some special occupational stress or as a result of faulty joint mechanics.

Premature degeneration of a severe nature and more rapid in evolution occurs in joints in which the articular cartilage has been damaged by trauma, infection, or avascular necrosis of the underlying bone. Rapid degeneration may also occur in joints deprived of the protective reflexes afforded by normal pain and proprioceptive sensibility.

Although the degenerative arthritis of old age may affect many joints, the premature degeneration resulting from previous damage by trauma, etc., tends to affect only one or at the most a few joints, because the degenerative process is secondary to these causative factors, which as a rule are operative in only one or a few joints and, since the degenerative process is slowly progressive, the resultant disability also tends to be slowly progressive, though acute painful incidents following trivial injury or unusual stress may be superadded.

The clinical and radiological features of degenerative arthritis are well known, and patients with this condition are seen with great frequency, particularly in orthopaedic clinics; but in clinics dealing largely with rheumatic disease one often sees polyarthritic patients in whom the joint changes in the later stages resemble those of degenerative arthritis, though they differ somewhat in that they often have a rather acute spontaneous onset. Furthermore, these patients tend to present a definite pattern of joint involvement characterized by affection of the distal interphalangeal joints of the fingers, and the first carpo-metacarpal joints in the hand, the great toes, and first tarso-metatarsal joints in the feet, the interfacetal joints of the spine, the knees, hips, and other limb joints. These patients also present certain other characteristic clinical and radiological features which differ from those found in classical degenerative joint disease on the one hand and polyarthritis of the rheumatoid type on the other, and we have come to classify these cases under the heading of primary generalized osteoarthritis, which we consider to be a distinct clinical entity.

More than 150 years ago William Heberden recognized the fact that the nodes so often seen over the distal interphalangeal joints of the fingers represented a condition distinct from either gout or rheumatism, and in 1805 Haygarth described 34 cases of multiple arthritis associated with Heberden's nodes which he classified separately under the heading of "nodosity of joints." A

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