TRUANTS

AN eponymous lecture bearing a name so honoured calls for reference, however brief, to the great scholar and physician who endowed it and whom we commemorate to-day.

Thomas Linacre (1460–1524) was a child of the sister University of Oxford. During undergraduate days he had formed friendships with Grocyn and Latimer, and these names stand to-day as the Oxford triumvirate with whom true English scholarship begins. At the age of 24 he was elected a Fellow of All Souls. Like his teacher, William de Selling, and like Harvey long afterwards, he was attracted to Italy by the scholarship there coming to new birth. In Florence he shared with Piero and Giovanni de Medici (afterwards Leo X), the instruction given by Poliziano, and he graduated at Padua as in due time did Harvey. Of Linacre, Thomas Fuller says that on his return to England "he brought languages along with him and was the first restorer of learning in our Nation. It is questionable whether he was a better Latinist or

Grecian, a better grammarian or physician, a better scholar or man for his moral deportment. By his endeavours Galen speaks better Latin in the translation than he did Greek in the original", an opinion first held by Erasmus himself. Of Linacre and of Caius, Fuller says that they were the two "Phoenixes of their Profession and of our Nation".[1] Linacre was fortunate in the moment of his birth. Coming into the world after its intellectual sleep of more than 1000 years, at the moment when opportunities for the new learning of long-forgotten truths had but recently been created, when man's thought, rarer, intenser, was self-gathered for an outbreak, and chafing for escape, he sought in Italy, where all the world's scholarship and its greatest teachers were then to be found, that inspiration and guidance which were to make him, when he returned to his own land, the apostle of learning. During his life more highly esteemed as scholar than as physician, such men as Eras-

[1] Fuller wrote: "Yes, I may call these doctors, the two Phoenixes of their profession in our Nation, and justify the expression, seeing the latter in some sort sprang from the ashes of the former." Their joint monument in old St Paul's was surmounted by a phoenix.

mus, Bude, Aldus made him their friend and regarded him as their intellectual equal. In Greek he was "a prodigy of learning". Richard Pace tells us that rhetoric and dialectic equally claimed him as their own, and he speaks of a brilliant disputation against senior physicians on his graduation. To his teacher Leonicenus (1428–1524), Professor of Medicine in Padua, Bologna and Ferrara, a great medical humanist, he was deeply indebted; a debt he repaid to scholarship by his teaching both of Erasmus and St Thomas More. As a physician we now remember him chiefly as a founder and the first President of the Royal College of Physicians, and also as physician to Henry VIII, Cardinal Wolsey, Colet, and many others distinguished by high position at Court, or by scholarship. He was regarded as foremost among philosophers. To-day, we gratefully repeat the annual tribute this College and University pay to his illustrious memory.

As corollary to this brief record of Linacre's vagrant gifts to classic learning, to scholarship, philosophy and dialectic, I invite your attention to the many varied gifts that medicine has through other truant disciples made to science, to literature, to law, to the State.

The bond between medicine and science is ancient. In Egypt nearly six thousand years ago, when Zoser was Pharaoh and was building at Sakkarah the step pyramid—now the oldest stone building in the Eastern hemisphere—his chief Lector, Priest, Architect, Physician, Grand Vizier, was one justly named Father of Medicine, Imhotep. He was the First Truant.

Is it credible that such imposing and beautiful works as this eternal pyramid and its satellite temple could have been erected without that kind of informed knowledge based upon repeated experience from which the word "Science", in however rudimentary a sense, can hardly be withheld? Here are seen fluted columns, exquisitely designed and marvellously wrought, nearly 2000 years before their alleged creation in Greece. The secret of their origin is revealed as being due to the pressure of papyrus reeds bound round soft columns of Nile mud until drying and hardening made them strong and able to bear weight; when the reeds were removed the columns were fluted. Yet each corner at a wall's end is carved out of a single stone, instead of being automatically made by the laying of two stones end-to-side. When at last

the Greeks came to Egypt they realised that the gospel of Imhotep tallied with that of their own divinity, Aesculapius, and Imhotep was deified. If by Science we mean applying to the physical world methods of observation, of comparison, of critical judgment and of planned experiment, then a form of science, however embryonic, had assuredly long been the possession of the ancient Egyptians. The existence to this very hour of the multitude of formidable architectural works in Egypt, and of perfectly proportioned furniture for daily use, is the clearest evidence that, in respect of the laws of physics, no small understanding had already been gained. The Ahmes papyrus of 1700 B.C., founded upon a still earlier work, gives further evidence of knowledge of certain laws of mathematics. There is, however, no evidence of sound appreciation of scientific *idea*; and science must surely be regarded as the "special application of rational ideas to the known physical Universe".

In the earliest stage of man's communal existence, the lives of people brought together for security and maintenance depended in large measure upon the application of laws gained by mass experience and upon recognition of laws,

not only enabling them to provide for their material sustenance, but also determining individual conduct and social relations. Certain crude generalisations, rough indeed but effective, were surely the first proofs of the existence of a scientific method of approach to problems concerning life and livelihood. It was in the fertile valleys of the Tigris, the Euphrates and the Nile that such known events first occurred. And in the same sense in which we derive Greek art through Minoan from Egyptian, so may we derive Greek science from the rudimentary form first developed in such manner in the valley of the Nile. Thales of Miletus (640–550 B.C.) we honour as the first evangelist of science in Europe. Journeying to Egypt on affairs of commerce, he there learned those elementary forms of mathematics and of science which had long been the possession of a people to whom we owe works of art which for design and exquisite craftsmanship have even yet perhaps hardly been surpassed. Returning to Miletus, Thales, inspired by all that he had learned, abandoned business, and consecrated his life to the further pursuit of the knowledge encountered on his travels. He it was assuredly who lighted the

lamp of science that was to burn so brightly for 800 years; then to grow dim almost to extinction; then again to glow with new and increasing brilliancy down to our own time.

The science of the Greeks from first to last may be claimed as the child of medicine. Intellectual or technical assault upon all branches of human knowledge depends upon principles brought into existence or notably enlarged and advanced by those engaged in the practice of medicine. That the world in which we live is governed by laws; that we formulate such laws after close observation of and long brooding upon phenomena; that these are also considered in the mind apart from their material embodiment; and lastly that by experiment we test the validity of these laws; this whole scientific idea we owe, then, to Greece. First among Greek observers we place Hippocrates, to whom, unfairly, is given the title of Father of Medicine, the due of Imhotep. By applying his mind to diseases, by recognising and differentiating their symptoms, and by grouping these with conditions similarly occurring in a series of individual patients, he discovered the principle that from a multitude of singular examples a general truth

may be raised. The Hippocratic corpus, springing from seed planted in still earlier days, grew stronger as it was tended by the hand of the Coan physician, and in it the method of inductive logic took origin. This practice of wide observation, comparison and contrast, reasoned judgment and final decision, Hippocrates made his own. From him all literature of science derives. His claim to be first of scientific writers cannot be gainsaid. In his own work he incorporated all knowledge then current, being recorder no less than researcher. Aristotle attributes to Socrates the elaboration of two logical functions, general definition and the inductive method; but the claims of Hippocrates are primary and irrefragable. It was perhaps in dealing with surgical matters that Hippocrates was led to announce clearly and categorically the first principles of inductive research and practice, namely, phenomena first, then recognition of phenomena as something separate from the material by which they were exhibited, then endless rearrangement within the mind of the observer, then judgment, then general propositions, then practical knowledge and craft. The quarrel as to whether medicine is science or art has not yet quite subsided

nor will it be silenced until men recognise that medicine has contact with both, with science in its enquiries, with art in its practice. Hippocrates, like all ancient Greek authors, speaks of medicine not as an art but as "the Art"; and he writes "Where the love of man is there is also love of the Art."

It is remarkable that the method of observation should have taken its origin in a direction where its exercise is most difficult. In other sciences phenomena presented for observation are "pure"; in medicine they are rarely unaffected by passage through the patient's mind which seeks to interpret yet unwittingly interposes a veil of obscurity. The observer is then confronted with phenomena not as they exist, but impure, in varying degree adulterated by the mind or affected by the will or the temperament of the sufferer.

For us in medicine, then, Hippocrates stands for the ideal physician, a man of purest integrity, humane in thought and in every action, the unwearied collector and collator of all truths accessible to the most acute observation; the first to utter great generalisations in reference to any science. For centuries his followers added

nothing to our knowledge of the science or the art of medicine. They were concerned only with the verbal message he had left in the Hippocratic collection, not with the ardent spirit that possessed him in the long years devoted to his enquiries. So has it often been in medicine. The great teacher leaves behind him the written word, or the memory of the spoken word; these become a gospel, uncritically preached by all acolytes who have humbly served the high priest. Those who have learned from a great master must surely not be content to imitate his methods, but rather must strive to capture his authentic spirit, and in that spirit to seek for new roads, and so to discover still firmer truths. Few virtues are nobler than loyalty to a great tradition. But such tradition is kept alive not by routine observance of ancient ceremony, nor by mute obedience to outworn creed, but by active faith for ever seeking new truths and exploring new paths, in conformity with the old spirit, and with unfaltering devotion to that great ideal which tradition enshrines.

Science for its advance also requires that phenomena when accurately and separately observed shall be submitted to test, that is, to experiment.