

On the discovery of leucocythemia, (being a reply to a letter on that subject by Professor Kölliker, in the Monthly journal of medical science for October 1854) / by John Hughes Bennett, M.D.

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DISCOVERY OF LEUCOCYTHEMIA,

(BEING A REPLY TO A LETTER ON THAT SUBJECT BY PROFESSOR KÖLLIKER, IN THE MONTHLY JOURNAL OF MEDICAL SCIENCE FOR OCTOBER 1854.)

By JOHN HUGHES BENNETT, M.D., F.R.S.E.,

PROFESSOR OF THE INSTITUTES OF MEDICINE AND OF CLINICAL MEDICINE IN THE UNIVERSITY OF EDINBURGH, ETC. ETC.

PROFESSOR KÖLLIKER of Wurzburg having undertaken to lay before the English scientific medical world the history of the discovery of Leucocythemia *as it is understood in Germany*, I think it due to his scientific character and to the temperate tone of his communication, to correct the errors into which he has been led. In reply to his appeal to my sense of justice, I request from him a careful perusal of the following statement, in the confident belief that he will take some opportunity of informing such of his countrymen who may feel interested in the subject what are the real nature of my claims to the discovery in question.

It is said by Professor Kölliker that the first observations on this subject occur in the year 1845, and take their origin from a case of disease by Dr Craigie, etc., etc. Now, the fact is, that Dr Craigie's case occurred in 1841; and it is admitted by Dr Craigie himself that it would not have been published even four years afterwards but for the occurrence of mine. He says, "I kept it unpublished from the period at which it took place; and it is published at this time, chiefly because of the occurrence of a case in many, if not in all, respects similar to another physician in the same hospital, led me to anticipate similar results, and went far to confirm my conclusions deduced from the first case."—*Edinb. Med. and Surg. Journ.*, Vol. LXIV. p. 402.

Professor Kölliker takes great pains to show that Dr Craigie and myself held the same opinions as to these cases, and that in mine, which followed his, "nothing further was elucidated." On the other hand, he says Professor Virchow was the first to point out that "no signs of inflammation in the veins were any where discoverable," etc. Now, exactly the contrary of this is the fact. Dr Craigie put forth two possibilities as to the cause of the blood disorder. 1st. He says, "It is barely possible that some *inflammatory action* had taken place in the tributary or constituent veins of the mesenteric trunks; and that the *purulent matter and lymph thus formed* had been conveyed into their interior with the blood, and thence into the *vena cava*, heart, and vessels of the brain." 2d. He says, "Another opinion occurred to me, however, as more probable, and which various circumstances in the case induced me to regard as the most correct. Considering that the spleen had been for some time, that is, for several weeks, in a state of *chronic inflammation*, and taking into account the large vessels with which this organ is connected to other organs, it appeared to me that this *inflammatory process*, which had been continuing so long without abating, subsiding, or being subdued, was at length beginning to give rise to the formation of lymph and purulent matter, and that these substances, as they were formed, were immediately taken into the veins, and thus circulating with the blood, gave rise to the peculiar assemblage of symptoms which the patient presented during the few days preceding his death." (P. 409). From these extracts it must be clear that Dr Craigie considered the blood disease as secondary, and dependent on the absorption of pus from an inflammatory lesion either in the mesenteric veins or spleen.

The view taken up by myself was wholly different, viz., that the blood disease was primary, originating in that fluid itself, altogether independent of local in-

flammation, and especially unconnected with inflammation of the veins. This will appear from the following extracts from my paper:—"In the present state of our knowledge, then, as regards this subject, the following case seems to me particularly valuable, as it will serve to demonstrate the existence of true pus formed universally within the vascular system, *independent of any local purulent collection from which it could be derived.*" (Pp. 413, 414). And again, "Pus has long been considered as one, if not the most characteristic, proof of proceeding acute inflammation. But in the case before us, what part was recently inflamed? *There was none.* Piorry and others have spoken of an inflammation of the blood, a true hematitis; and certainly if we can imagine such a lesion, the present must be an instance of it. But it would require no laboured argument to show, *that such a view is entirely opposed to all we know of the phenomena of inflammation.*" (P. 421). From these passages it must be clear that I then separated the state of the blood from pre-existing inflammation in any of the tissues, which had not been done by any preceding author. Thereby I established a new blood disease—one of a primary nature. I carefully described all the facts, which Virchow has only subsequently confirmed. I spent three entire days investigating the histological character of all the tissues in the body, and in demonstrating the important fact, that the colourless corpuscles in the blood were unconnected with inflammation. Notwithstanding all this, Professor Virchow has wilfully and pertinaciously endeavoured to persuade his countrymen that I regarded the case as one of ordinary pyæmia or purulent absorption; and Professor Kölliker, in his present communication, says of these laborious researches, that "nothing further was elucidated" beyond what had previously been determined by Craigie and Reid.

Here, it should be observed, that Dr Craigie was the editor of the Edinburgh Medical and Surgical Journal in 1845—that he read my paper before his own was written, and placed his own case first in the October number. Further, Professor Kölliker should be made aware that Dr Craigie was no histologist, and had never employed the microscope in the investigation of disease. To argue, then, that the discovery of this condition of the blood—a discovery altogether dependent on histological research—was made by him, seems absurd in the extreme. But it may be maintained that this part of the inquiry was carried out by Dr John Reid, because he stated in the register, kept by him as pathologist of the Infirmary, that the blood "contained globules of purulent matter and lymph." The few words now quoted constitute literally the whole of Dr Reid's observations on the matter. They would have been buried in oblivion, if I myself had not found them in the register of dissections, pointed them out to Dr Craigie, and indicated their importance. I have frequently conversed with Dr Reid himself on the subject, who had forgotten the circumstance of having examined the blood microscopically in Dr Craigie's case, or of having made a note of it. Certainly he paid no more attention to it, or in any way thought it more important than a host of other notes he made, which still exist in the pathological register, and in which some future controversialist may doubtless find many similar discoveries, as yet unknown. At all events, it is certain that neither Dr Craigie nor Dr Reid ever imagined to themselves that the "globules of purulent matter and lymph" seen by the latter originated independent of purulent absorption, or ever dreamed of claiming for themselves the discovery of leucocythemia. Who then did make it? Certainly not Virchow, who with Kölliker, in order to depreciate the value of my observations, claim it for these gentlemen. And if none of the three made it, the inference undoubtedly is, that the discovery belongs to me.

What, then, it may be asked, does Professor Kölliker claim for his colleague? It cannot be the discovery of the facts, or of the existence in large numbers of colourless corpuscles in the blood, independent of inflammation. All the histological facts—the white appearance of the blood (white blood), its independence of inflammation, and its separation from all previously known pathological conditions—were described by me in the paper of the 1st of October 1845; whereas it is certain that Virchow's short and comparatively imperfect histological description of a case of white blood (the white appearance of the blood

being the chief point he dwelt upon) was printed in the second number for the following November, although from the admission of Professor Kölliker, as to the practice which prevails in Germany, the actual period of its publication may have been much later. Hence all that can be claimed for Virchow amounts to this, that he puts forth *an opinion* regarding these facts different from mine, but the possibility of which I clearly indicated. For having described the peculiarities of the blood—the white coagulum, its structural characters, the colourless corpuscles, their relation to the red ones, and the absence of the inflammatory appearances in every tissue, not excepting the veins—the questions remained, What are these corpuscles? How are they produced? In reply, I remarked that “with regard to the colourless corpuscles of the blood, *we know of no instance* where they existed in the amount, or ever presented the appearance described.” From this passage Professor Kölliker draws the inference that I denied that these bodies were the colourless corpuscles of the blood. But I need scarcely point out that the passage does not fairly bear that construction. On the other hand, it clearly shows that the possibility of their being these colourless corpuscles was fully entertained. At that time the whole subject was histologically new; and having shown that the cells observed closely resembled those of pus in their structural and chemical characters, I said so, and concluded they were pus corpuscles. But having also demonstrated that they could not have been derived from any inflamed tissue, it only remained to be concluded that these bodies were formed in the blood system itself, constituting a primary suppuration of the blood. Here, I contend, was the real discovery, which was at that time quite new, and remains up to this hour, in my belief, a correct generalization.

Whilst Professor Kölliker seems to attach no importance whatever to my careful histological examination of the blood and of the tissues, and wholly disregards the fact I was at so much pains to establish, that the colourless corpuscles I described, were not dependent on inflammation, he thinks it of the greatest importance that Virchow should have stated that these corpuscles were not those of pus. To me it has always seemed of little importance by what name these bodies were designated, so long as the facts regarding them were described with exactitude. It cannot be denied that I first discovered and described them, and pointed out their origin in the blood itself. What histological difference there can be between pus cells independent of inflammation, originating spontaneously in the blood, and the colourless corpuscles of that fluid, I am at a loss to imagine. Yet this is the only distinction which Virchow made. But, what are pus corpuscles but cells presenting certain physical characters originating in an exuded blood-plasma? and what are the colourless corpuscles of the blood but similar cells originating in a plasma contained in the blood glands? I have yet to learn that there is any true histological difference between them; I believe still that the only distinction is that the same corpuscles originate in blood-plasma, sometimes outside, and sometimes within the blood system. If so, the controversy raised by Virchow, and maintained by Kölliker, is wholly one of words. Here I may mention, that, acting on the persuasion that the two kinds of corpuscles, hitherto separated, are really identical, I opposed the generalization of Mr Henry Lee, which set forth that pus brought in contact with living blood caused its coagulation. In conjunction with Professor Barlow of the Veterinary College, I injected considerable quantities of pus into the veins of an ass, in order to determine this point. I thus increased the colourless cells in the blood of the animal without producing any coagulation or inflammation whatever.—(*Monthly Journal*, January and March, 1853, pp. 80 and 272, 273). Moreover, it may be questioned, and indeed it has been questioned in a communication which I received from Professor Gluge of Brussels, and in an article by Dr Radcliffe (*Half-yearly Abstract of the Medical Sciences*, Vol. XVI. pp. 295), whether this distinction can have any real foundation, and if it have not, then the pretended discovery of Virchow sinks into nothing, as it is not founded on fact, but simply on opinion.

As to the subsequent progress of this inquiry, I have only to express my astonishment at the statement made by Professor Kölliker, that in 1851 in the

Monthly Journal, and that in 1852, in my separate work, I made no allusion to my former views, and did not take the slightest notice of the labours of Virchow. It is most untrue. My views regarding this disease have always been the same, but never such as Virchow and Kölliker have represented them; and so far from denying the labours of the former pathologist, I have fully set them forth, and quoted all his facts and observations. I always have and still continue to estimate highly the value of the facts he has contributed in connection with this important subject. But what he has accomplished does not entitle him to the original discovery of leucocythemia, or to giving it a place in pathology.

Careful investigation into this subject will, I am satisfied, convince the candid inquirer that the discovery of leucocythemia and the subsequent progress of ideas regarding its nature may be divided into three epochs or stages as follows:—

1. PROFESSOR BENNETT.—Discovery of a new morbid condition of the blood, consisting of multitudes of colourless corpuscles, resembling those of pus, associated with hypertrophy of the spleen and liver, and presenting after death peculiar white coagula. Shown to be unconnected with inflammation in any of the tissues, and especially unconnected with phlebitis. Attributed to the development of the corpuscles in the blood itself.
October 1, 1845.
2. PROFESSOR VIRCHOW.—Confirmation of the preceding facts, but the corpuscles said to be an increase in the colourless cells of the blood. New cases, and especially one of great value, in which a similar condition of the blood was associated with enlargement of the lymphatic glands without hypertrophy of the spleen. Origin of the colourless cells attributed to the lymph glands; proposed name of leukhemia or white blood.
Series of papers from the 2d or 3d week of November 1845 to 1847.
3. PROFESSOR BENNETT.—Systematic view of the whole subject. Additional facts and cases, with chemical analyses of the blood. Doctrine that the lymphatic and other ductless glands secrete the blood; proposed name of leucocythemia or white-cell blood, and the relation of this disease to other pathological conditions, and to practical medicine pointed out.
Series of papers, 1851.

From this view of the case, it will be seen that I am far from undervaluing or wishing to hide Professor Virchow's contributions to the pathology of leucocythemia—whereas he, in order to make it appear that the origin as well as development of the whole subject was due to himself, has not hesitated to give the most erroneous and partial accounts of my facts and views. I very much regret that the note published in his Archives, dated August 1852, should have contained such injurious and insulting expressions. Had it been more temperately written, I should at once have replied to it, and so endeavoured long ago to place this controversy on its proper basis. I must be excused, however, from entering into literary warfare with revolutionary combatants, whose chief weapons are detraction and attacks on character. But since Professor Kölliker has descended into the arena as a champion for his colleague, I have no longer any objection to enter the lists with such an opponent—trusting that one so distinguished in the field of science, like the chivalrous knight of old, will conduct himself not only *sans peur*, but also *sans reproche*.

CHARGE

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TO

THE GRADUATES

OF

JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA;

DELIVERED MARCH 11, 1854,

BY

PROFESSOR ROBLEY DUNGLISON.

WITH

A LIST OF THE GRADUATES.

Published by the Graduating Class.

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CORRESPONDENCE.

JEFFERSON MEDICAL COLLEGE, *March 4, 1854.*

Prof. DUNGLISON:—

DEAR SIR: The Graduating Class, through the undersigned, their Committee, respectfully solicit, for publication, a copy of your Valedictory Address, to be delivered at the ensuing Commencement.

We are, very respectfully, yours, etc.,

L. B. TODD, Ky., *President.*

DELAVAN BLOODGOOD, N. Y.

STEWART KENNEDY, Pa.

JOHN B. TURNER, Geo.

THOS. M. REDD, Ky.

EDWARD CASS, Ohio.

Committee.

PHILADELPHIA, 18 GIRARD STREET, *March 4, 1854.*

GENTLEMEN: I have great pleasure in delivering into your hands, for publication, a copy of my "Charge" to the Graduates, which was intended for them, and I consequently regard it as theirs. With best wishes for the happiness and prosperity of yourselves, and of the large *corps* whom you represent,

I am, faithfully yours,

ROBLEY DUNGLISON.

Messrs. L. B. TODD, DELAVAN BLOODGOOD,
STEWART KENNEDY, JOHN B. TURNER, } *Committee of the Graduates.*
THOS. M. REDD, and EDWARD CASS. }

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CHARGE.

GRADUATES OF JEFFERSON MEDICAL COLLEGE:—

As the appointed representative of the Faculty of Professors, whose gratification it has been to recommend you to the Board of Trustees of this College for the degree of *Doctor of Medicine*, it is my pleasing duty to congratulate you on this crowning termination of your collegiate medical course—the *commencement* of your active professional existence. The great objects for which you left your homes have been accomplished; and you are on the eve of returning to them, to shed gladness on the social circle, and to be welcomed with a fervency that “blesseth him that gives and him that takes.” In the name of that Faculty, most cordially do I congratulate you on the distinction you have this day attained, and on your reception from this time forward into the ranks of a profession, of which all of you, I hope, will be zealous, efficient, and honorable promoters.

You enter upon the practical exercise of your avocation in an age characterized by the energetic efforts of observers, everywhere, to extend its limits. At no period of history has the medical mind been more active; and never has it been more prolific in useful results.

It has often been to me an agreeable and encouraging topic to institute a comparison between the present and the past, both as regards the condition of the profession and of medical instruction and practice; and I have, on no occasion, risen from the contemplation of the theme with any of those feelings of gloom in regard to its onward progress, which have seemed, from time to time, to

possess the minds of some of my more desponding brethren. No one, it appears to me, can investigate the history of physic and physicians in that impartial spirit which becomes the inquirer after truth, without being satisfied that the science is eminently progressive; and that the average qualifications of the practitioners of the present day far exceed those of their predecessors of even recent periods. It may be safely averred, that at no time has there been as great a proportion of practitioners who have had the benefit of medical education in the schools. The numerous medical institutions in this wide-spread country, and the greater readiness of intercommunication, have enabled almost all to receive instruction from those whose duty it is to prepare themselves for the responsible office of teachers. Ignorance now, therefore, admits of no palliation; and even were we to grant, that the multiplication of medical schools may have tended to lower the standard of qualifications, and made the attainment of the *summi honores* more easy, it must have equally tended to the more extensive diffusion of medical information.

In the whole bearing of the medical practitioner of the day; in the comparative absence of pedantic pretension, and in the non-assumption of qualifications and virtues which he possesses not, he generally contrasts most favorably with his predecessor of by-gone times.

To a certain extent, the condition of medicine—a science of observation and reflection—has, at different periods of history, been influenced by that of the physical and moral sciences; and a signal difference between the age of Bacon, the Chancellor, for example, and our own is, that in the former the most eminent physicists were ready to adopt—and did adopt—mysterious credences, and to abandon themselves to the wildest and most hypothetical conjectures; whilst at the present day few are so far led away from the paths of correct observation and sober reality; and where one of elevated position is found amongst the errant, he stands out in bold relief—a target for the shafts of stern animadversion or pointed ridicule.

Yet we should be greatly in error were we to infer, that whilst

physical knowledge is increasing, credulity is diminishing *pari passu*. There never has been a period more dominant with delusions than the present, and never one when they were more wild and untenable. "Why," wrote a distinguished Dublin *savant*, holding the first rank in our profession, in a letter to me some years ago, "do you not send us something in return for the inflictions of phrenology, mesmerism, homœopathy, &c. which we put upon you?" We had, at that time, furnished Europe with Thompsonianism; and, since then, we have more than returned the compliment by the various offshoots from legitimate medicine, of indigenous growth; and by our electrobiologies, neurologies, table-turnings, table-talkings, and spiritual rappings.

The same causes are at the root of all delusions; and it would seem that there must always be some "tub to amuse the whale." Accordingly, these moral epidemics—if they may be so termed—rage for a while, and ultimately sink below the horizon, to be succeeded by others; and, in the lapse of time, by the resuscitation of the former under some new shape, and to pursue a like path. Mankind must be amused. It would almost appear, that they must be deceived; and it is an apothegm largely admitted, that they have the right to be so if they desire it—"quandoquidem populus decipi vult decipiatur."

These multiform delusions spring from the credulity of man; his love of the marvellous; his unbounded enthusiasm in the prosecution of whatever holds out prospects for improving his general or bodily condition, and for administering to his health and comfort.

This credulity unhappily pervades all classes. It causes the same confidence to be placed in the ignorant and mercenary pretender as in the skilful and learned physician; and levels downwards the distinction between science and empiricism—thus confounding the high-minded cultivator of a noble science with the grovelling pursuer of a low trade.

And how is all this to be rectified? To attempt to strangle empiricism by legal enactments would be futile. In the reign of James

the First of England, a warrant was issued to the magistrates of the city of London to apprehend all reputed quacks, with other offenders of the like nature, and to bring them before the Censors of the College of Physicians; and the king himself sent letters to the same effect to the lord mayor. They could not, of course, commence with his Majesty—perhaps the archest quack of all; and history fails to inform us whether any ultimate benefit resulted from this stringent course.

Laws, to render essential service, ought to be directed against all forms of delusion; and even then they must fail. The evil reposes in the natural constitution of the human mind, and, it is to be feared, does not therefore admit of entire eradication. It has always appeared to me, that the most feasible course is to educate properly the people; to instruct them, in our schools and colleges, in the normal acts of the human body; and thus to steel the youthful mind, as far as practicable, against the arts of the specious and unprincipled. And yet we are met by the humiliating fact that, so far as we can gather from history, the most benighted periods have not been the most prolific in quackery and imposture. “Those rapacious depredators”—the quacks—says the present enlightened President of the Royal College of Physicians of London*—“are not of one place or of one season—they are the ‘perennials of history;’ and there is not a nation which has not been infested and disgraced by them, nor an age in which the patronage of the aristocracy has not been at their disposal. Rank and opulence have ever been ready to provide a sanctuary in which ignorant pretenders might enshrine themselves.”

In the lapse of time embraced by the historical annals of our profession, what a mass of true experience ought to have been accumulated; of chimeras overset and uprooted; of false facts destroyed by after and more exact observation; of physical science daily advancing, until, in our own times, the discoveries in it have burst

* Dr. Paris.

upon us in unrivalled splendor, and we are surrounded by inventions and improvements that have projected us ages, as it were, in advance of our immediate predecessors; and yet the debasing reflection is forced upon us, that at no period has quackery been more rife; and at this moment, in our very midst, a vast monument of its successful prosecution "like a tall bully lifts its head" in close proximity to those lines of electric communication, which are the triumph of physical science,—as if in mockery of the position, that credulity is to be abolished, or materially diminished, by the advancement and diffusion of knowledge!

And is it to simple credulity or to faulty observation, to too prolific imagination, or to unworthy motives, that we are to ascribe published results of experience to which the uninformed are apt to give their implicit belief? Take, for example, those "provings," as they are called, quoted by Professor Simpson, of Edinburgh, from a volume issued by the Hahnemann Publishing Society, of London, in which we are assured that the presence of a "delusion that thieves are in the house," is a symptom of arsenic; a "delusion, that men are swine," a symptom of henbane; an "imaginary vision of cats," an effect of *æthusa*; an "imaginary vision of rabbits," an effect of stramonium; "pretending to crack nuts," a symptom of henbane; "pretending to count money," a symptom of belladonna; "pretending to drive away peacocks," a symptom of *hyoseyamus*; "eats his shoes," an effect of *veratrum*; "tries to climb up the stove," an effect of henbane; "dancing in the churchyard," a symptom of stramonium; and an "inclination to pull people's noses," a symptom produced by mercury!

But is there no sunny spot in this clouded atmosphere of delusion—no encouragement in those cycles of follies to hope for future improvement? Is the human mind in the same enthralled condition as in ancient or even in mediæval periods? Far from it. In those distant days, knowledge was confined to the few; and mystery, the offspring of imperfect knowledge, itself, indeed, imperfect knowledge, pervaded the *οἱ πολλοί*; whilst both superstition and credulity tainted

the learned equally with the unlearned. The advancement and diffusion of information have dispelled the former; but the constitution of the human mind appears to render it a permanent resting-place for the latter. In other words, the science may now be regarded as freed from its superstitions, whilst we have too many lamentable evidences, that credulity still clogs its onward course.

The essential difference between the investigator of science of former and of recent periods is, that whilst the one imbibed implicitly, from his predecessors and instructors, the commingled results of fabulous and traditionary lore, imperfect observation and the veriest conjecture; the other—he of the present day—scatters to the winds that which has no foundation but tradition; whilst the results of careful, repeated, and confirmed observation of phenomena are duly recorded and treasured by him, and constitute a platform whence he may ascend still higher in his endeavors to deduce their laws.

To observe phenomena is one thing—to know their laws another. The mere observer of phenomena or collector of facts is not necessarily a man of science; nor is the philosopher necessarily the best of observers. Twice happy is he, who is endowed with the attributes of both!

What advantages, then, are possessed by us of the present day in the prosecution of one of the most noble of human inquiries, whose origin must have been coeval with the earliest created beings, and an object of solicitous investigation in all ages; at one time, conjectural, labyrinthic, and the sport of the wildest speculatists; at another, proceeding steadily onwards, under exact observation and sound philosophy; and, now, purified from most of the ideal, and all of the supernatural which formerly beset its path!

There never was a period when observers were more numerous. The press, at home and abroad, teems with works of merit; whilst periodical literature distributes, far and wide, the results of individual experience and reflection.

In some "*Letters on International Copyright*," recently published by

a literary gentleman of this city,* he has given a list of the estimated sales of certain American literary and scientific works, from which he infers, that "this country presents a market for books of almost every description, unparalleled in the world." Some of his facts, Mr. Carey states, were furnished by the publishers, whilst others were "derived from gentlemen connected with the trade, whose means of information are such as to warrant entire reliance upon their statements." It is not improbable, however, that had a strictly accurate account been obtainable, it might have proved still more astounding. For example, the sale of seven of my own works, consisting of ten volumes, is estimated by him at 50,000 volumes. I have taken the pains, since I first saw the published statement, to arrive at positive knowledge, and I find that the number is upwards of 80,000.

Where your circumstances will admit of it, procure for yourselves at least one of the standard medical periodicals, and the most authoritative works on subjects connected with your profession as they appear; and, by a judicious selection, you will be placed in communion, as it were, with the best minds. The illiterate, uninformed, and self-sufficient are apt to deride acquirements, which they possess not, and to ridicule the information to be derived from books—"book-learning," as they contemptuously term it. Can there be a better evidence of presumptuous ignorance than the proposition to discard the accumulated wisdom of ages, and to rely wholly upon a man's own fallible experience? For the satisfactory and successful prosecution of your profession—one of the most recondite and arduous of human undertakings—you must be guided by all the lights that have illumed, and continue to illum it. Although your student-life, within the walls of your alma mater, may cease from to-day, study must terminate only with your existence. The physician who is laggard, and neglects it, must consent to fall far behind his more industrious competitors.

* Mr. H. C. Carey.

Graduates ! We have hitherto been placed in the hallowed relation of preceptor and pupil. Henceforth, we are co-equals, fellow members of the same great brotherhood. You go abroad as the representatives of by far the largest medical class, and are yourselves much the largest class of graduates, that has ever issued from the halls of Jefferson Medical College, or of any similar institution in this country.

In the valedictory address to the graduates, delivered last year by my colleague, Professor Bache, after speaking of the opportunities for medical instruction presented by large cities, he remarks:—

“These local advantages, and the exertions of my colleagues, have gained for our school a steadily increasing favor; and we have seen, in the session just closed [for 1852–53], the largest class that has yet assembled within our walls—the largest, indeed, that up to this time has honored any medical school in the United States with its attendance.” The catalogue of that session numbers 556; that of the present, 627; being, probably, the largest class in attendance together on the same courses of lectures in any medical school in the world.

Seven years ago, on an occasion similar to the present, I ventured to affirm, that the multiplication of medical schools throughout the country, instead of diminishing the number of those that seek instruction in this city, would augment it; for the “facility of intercourse between the most distant places is so great, that a journey to Philadelphia is now within the means of a large proportion of medical students; hence it is, that so many visit her to pass at least one winter, in order that they may enjoy those ample opportunities for full medical instruction, which have obtained for her the character of being the great centre of medical education on this side of the Atlantic.” Such has eminently been the fact since then; and, of those whom I have now the honor to address as graduates of the session of 1853–54, nearly one-half have spent at least one scholastic year in other institutions.

From the most distant regions you have assembled to acquire in-

formation from the same founts. Whilst most of you are from different States of this Union, others are representatives from foreign countries—Canada, Nova Scotia, Cuba, England, Prussia, and Turkey.

Young members of a liberal profession! You go from us to take your position in society amongst the wisest and the best of the land; on an equality with them, so far as your avocation is concerned, and inferior to them only when your claims for personal consideration are less deserving. To your profession, honored alike by Christian and by Paganism, has been assigned by one of the greatest ornaments of the legal profession,* pre-eminence for general and extensive knowledge; and one of the most learned philologists† of his day has remarked: “While I allow, that peculiar and important advantages arise from the appropriate studies of the three liberal professions, I must confess, that in erudition and science, and in habits of deep and comprehensive thinking, the pre-eminence, in some degree, must be assigned to physicians.”

Spare no pains to uphold the character, thus given, of your elevated calling, and whilst you devote yourselves most strenuously to its duties and continued investigation, neglect not polite literature, nor any of those accomplishments which adapt you for general society, and enable you to take rank with the best informed of those with whom you are necessarily thrown in contact, and of whom you may be destined to be not merely the medical advisers, but the friends and counsellors.

Keep pace, as far as may be, with the advanced and advancing state of general science, but never allow yourselves to be so absorbed by it as to affect injuriously your devotion to the main pursuit. I know not a greater compliment, that could be paid you, than the declaration, that whilst you are thoroughly informed in your own profession, you are familiar with the liberal arts and with general

* Sir Wm. Blackstone.

† Dr. Parr.

science. The estimation, as accomplished gentlemen, in which you may be held, will depend less upon the extent of your professional acquirements—of which the laity can form but an imperfect judgment—than upon your general information and demeanor.

The avocation which you have embraced you are called upon to support, not merely as a means of acquiring an honorable subsistence; but as connected with, and consecrated to, the best interests of humanity. The practice of the profession affords, indeed, wide scope for the exercise of benevolence.

Let your manners and address be unaffected and courteous. Often will you meet with contradictions and disappointments; and not unfrequently, it is to be feared, with positive ingratitude. Whims and caprices, at times of the most unreasonable character, you may be called on to gratify; yet accustom yourselves to bear those evils with equanimity, when they do not conflict materially with your sense of propriety; but never permit it to be presumed, that you have not firmness to resist a proposition, which is, in your opinion, contrary to the best interests of your patient. When once your influence over him is lost, his respect for you is impaired; indifference is apt to be engendered; confidence is destroyed, and estrangement follows.

I shall not expatiate on the necessity of your possessing presence of mind to adapt you for every sudden and trying emergency, of which you will be destined to meet with many, in your surgical career more especially; nor on your obligations to secrecy, discretion, and honor. The mere mention of such "obligations" ought to be sufficient to impress you with their importance. As long ago as the first promulgation of the "oath" ascribed to Hippocrates, the professional neophyte was pledged by it to the fulfilment of these and other points of duty.

The pathway for professional usefulness, and even for distinction, is open to all of you; but beware of the fallacy, that it is always smooth and skirted with flowers. Difficulties and privations may beset your course; yet patient and abiding effort will urge you onwards, and enable you to surmount all obstacles. Unflinching atten-

tion to those who may seek your aid; conduct humane, charitable, and without reproach; temperance and sobriety; entire freedom from "envy, hatred, and malice, and all uncharitableness" towards your fellow-man, and especially towards a professional brother; with a rigorous observance of the Heaven-descended injunction of "peace and good-will towards men," can scarcely fail to lead you to eminence; but should inevitable circumstances prevent the desirable consummation, you will have the heartfelt satisfaction of knowing, that you have done all in your power to merit it, and to be esteemed at the close of, I trust, a long and happy life, as the upright, benevolent, conscientious, and "beloved physician."

Pursue, then, your dignified calling—"caute, caste, probeque"—circumspectly, correctly, and honorably. Be impressed with the responsible character of the trust that will be reposed in you. Feel, that the true dignity of medicine is to be maintained by the superior learning and abilities of those who profess it. Be open and candid, disdaining all artifice. Be ever kind, gentle, and sympathizing, and with the softest touch, smooth the pillow of the afflicted. Then may you set at naught the ridicule and rude reproach of scoffing ignorance. Prosperity and happiness will attend you. The infant on the maternal lap will be instructed to lisp your name with gratitude. The bereaved husband and father, the widow, and the orphan, in their desolation, will bless you for your skilful and benevolent exertions, even when unsuccessful. The affectionate parents, who tenderly watched over your youth, and witnessed with solicitude, your ripening manhood, will glory in you. Your Alma Mater—the flourishing Alma Mater—which has this day conferred on you her highest honors, will cherish you as the fond mother cherishes her offspring; and your country will be proud to rank you amongst the most useful and most meritorious of her citizens.

