

IMAGE EVALUATION TEST TARGET (MT-3)



Photographic Sciences Corporation

23 WEST MAIN STREET WEBSTER, N.Y. 14580 (716) 872-4503

STATE OF THE PARTY OF THE PARTY

CIHM/ICMH Microfiche Series. CIHM/ICMH Collection de microfiches.



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques



(C) 1986

## Technical and Bibliographic Notes/Notes techniques et bibliographiques

|   |  | 16X   | 20X           |  | 24X   |                             | 28X                     |     | 32X |
|---|--|---|---------------|--|---|-----------------------------|-------------------------|-----|-----|
| Ce docui  | ment est filmé au<br>14X   | teux de réduction in<br>18X                 | raique ci-des | 22X  |   | 26X                         |                         | 30X |     |
| Cor   |  | ementaires;                                 |               |  |   |                             |                         |     |     |
| Bie<br>app<br>liev<br>Il si<br>lors<br>ma<br>pas  | Blenk leaves added during restoration may appear within the text. Whenever possible, these lieve been omitted from filming/ Il se peut que certeines pages blanches ajoutées lors d'une restauretion eppereissent dens le texte, mais, lorsque cela était possible, ces peges n'ont pas été filmées. |   |               | Pages wholly or pertially obscured by errar slips, tissues, etc., heve been refilmed to ensure the best possible image/ Les pages totalement ou pertiellement obscurcies par un feuillet d'errate, une pelletc., ont été filmées à nouveau de façon à obtenir la meilleure image possible.   |   |                             | ed to<br>nt<br>ne pelur |     |     |
| alor  | ng interlor mergin,<br>re liure serrée peut  | ceuser de l'ombre d                         |               |  | Seule éd  | tion evaila<br>lition dispo | onible                  |     |     |
|   | ound with other meterial/<br>allé avec d'eutres documents  |   |               |  | Includes supplementary material/<br>Comprend du matériel supplémentaire |                             |                         |     |     |
|   | oured plates end/onches et/ou illustra   |   |               |  |   | of print vai<br>négele de   |                         | ion |     |
| Cole<br>Enc   | oured ink (i.e. othere de couleur (i.e.  | er than blue or black<br>autre que bleue ou | k)/<br>noire) | <b>/</b>   | Showthr<br>Transpar   |                             |                         |     |     |
| Col   | oured meps/<br>tes géogrephiques   | en couleur                                  |               |  | Pages de<br>Pages de  |                             |                         |     |     |
|   | ver title missing/<br>titre de couverture  | manque                                      |               | $\overline{\vee}$  |   | scoloured,<br>icolorées,    |                         |     |     |
| Cov   | vers restored and/e<br>uverture restaurée  | or lamineted/<br>et/ou pelliculée           |               |  |   | stored and<br>staurées e    |                         |     |     |
|   | rers dameged/<br>uverture endomma  | gée   |               |  | Pages da<br>Peges en  | maged/<br>idommagé          | es                      |     |     |
|   | oured covers/<br>iverture de couleu  | •   |               |  | Coloured<br>Peges de  |                             |                         |     |     |
| The Institute has attempted to obtain the best briginal copy available for filming. Features of this copy which may be bibliographicelly unique, which may alter any of the images in the eproduction, or which may significantly change he usual method of filming, are checked below. |  |   | 10            | L'Institut a microfilmé le meilleur exemplaire<br>qu'il lui e été possible de se procurer. Les détails<br>de cet exemplaire qui sont peut-être uniques du<br>point de vue bibliographique, qui peuvent modifier<br>une imege reproduite, ou qui peuvent exiger une<br>modification dens la méthode normale de filmage<br>sont indiqués ci-dessous. |   |                             |                         |     |     |

The copy filmed hare has been reproduced thanks to the generosity of:

Medical Library McGill University Montreal

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the fliming contract specifications.

Original copies in printed paper covers are filmed baginning with the front cover and snding on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and anding on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol → (meaning "CONTINUED"), or the symbol ♥ (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be sntirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:

L'exemplaire filmé fut reproduit grâce à la générosité de:

Medical Library McGill University Montreal

Les images suivantes ont été reproduites avec le plus grand zoin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

Les exempiaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'iliustration, soit par le second plat, selon le cas. Tous les autres examplaires originaux sont filmés en commençant par la première page qui comporta une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporta une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole → signifie "A SUIVRE", le symbole ▼ signifie "FiN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents.

Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut an bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.

| 1 | 2 | 3 |  |  |
|---|---|---|--|--|
|   |   |   |  |  |

| 1 |  |
|---|--|
| 2 |  |
| 3 |  |

| 1 | 2 | 3 |
|---|---|---|
| 4 | 5 | 6 |

pelure, n à

errata to

tails

du

odifier

une

mage

32Y

# TEACHER AND STUDENT.

## AN ADDRESS

Delivered on the Occasion of the Opening of the New Building of the College of Medicine and Surgery of the University of Minnesota, Minneapolis, October 4th, 1892.

BY

WILLIAM OSLER, M. D., F. R. C. P. LOND.,

Professor of Medicine in the Johns Hopkins University and Physician-in-Chief to the Johns Hopkins Hospital, Baltimore.

BALTIMORE:
JOHN MURPHY & CO.,
1892.

A University consists, and has ever consisted, in demand and supply, in wants which it alone can satisfy and which it does satisfy, in the communication of knowledge, and the relation and bond which exists between the teacher and the taught. Its constituting, animating principle is this moral attraction of one class of persons to another; which is prior in its nature, nay commonly in its history, to any other tie whatever; so that, where this is wanting, a University is alive only in name, and has loss its true essence, whatever be the advantages, whether of position or of affluence, with which the civil power or private benefactors contrive to encircle it.—John Henry Newman.

It would seem, Adeimantus, that the direction in which education starts a man will determine his future life.—Plato, Republic, iv.

# ADDRESS.

Your Excellency, Mr. President, Ladies and Gentlemen:-

When I received from the Dean of the College of Medicine, Dr. Millard, an invitation to deliver the opening address on this occasion, there were several reasons for a ready acqui-There was nothing nearly so good on hand for the first week of October, which long habit had made for me the week of weeks in the calendar. Here was a chance to satisfy the "besoin de respirer" in an atmosphere brightened by young lives, to still a deep autumnal yearning not unnatural in a man the best years of whose life have been passed with undergraduate students, and who has had temporarily to content himself with the dry husks of graduate teaching. Then the invitation was a great compliment, greater, for the distance it had travelled; but lastly and chiefly I wanted to see you all, to relieve a brotherly instinct such as sent David to his brethren in the eamp of Saul, an instinct which has often driven me far afield, and has enriched my life with good friends and pleasant memories.

Nor did I hesitate a moment in the selection of a subject. On such an occasion, and at this time, when the profession and public are awakening to the importance of medical education, my choice was necessarily restricted. Instead, however, of a formal presentation of the conditions and needs of medical study, I shall address myself chiefly to a consideration of some of our functions as teachers, in dealing with

which I can incidentally touch upon questions of general interest, and can, moreover; speaking on behalf of the Faculty, say a few words of welcome and encouragement to the classes which have assembled for the year.

## Ī.

Truly it may be said to-day that in the methods of teaching medicine the old order changeth giving place to new, and to this revolution let me briefly refer, since it has an immediate bearing on the main point I wish to make in the first portion of my address. The medical schools of the country have been either independent, University, or State Institutions. first class, by far the most numerous, have in title University affiliations, but are actually devoid of organic union with seats of learning. Necessary as these bodies have been in the past, it is a cause for sincere congratulation that the number is steadily diminishing. Admirable in certain respects—adorned too in many instances by the names of men who bore the burden and heat of the day of small things and have passed to their rest amid our honored dead—the truth must be acknowledged that the lamentable state of medical education in this country twenty years ago was the direct result of the inherent viciousness of a system they fostered. Something in the scheme gradually deadened in the professors all sense of responsibility until they professed to teach (mark the word) in less than two years—one of the most difficult arts in the world to acquire. Responsibility! fellow teachers in medicine, believe me that when in the next century some historian, standing perhaps in this place, traces the development of the profession in this country, he will dwell on notable achievements, on great discoveries, and on the unwearied devotion of its members, but he will pass judgment-yes, severe judgment -on the absence of the sense of responsibility which permitted a criminal laxity in medical education unknown before in our But an awakening has come, and there is sounding

the knell of the doom of the medical college, responsible neither to the public nor the profession.

The schools with close university connections have been the most progressive and thorough in this country. The revolution referred to began some twenty years ago by the appearance of the President of a well known University at a meeting of its medical faculty with a peremptory command to set their house in order. Universities which teach only the Liberal Arts remain to-day, as in the middle ages, Scholæ minores, lacking the technical faculties which make the Schoke majores. The advantages of this most natural union are manifold and reciprocal. The professors in a University medical school have not that independence of which I have spoken, but are under an influence which tends constantly to keep them at a high level, and the spirit of emulation with the other faculties improves the standard of work, and is a strong stimulus to further development.

To anyone who has watched the growth of the new ideas in education it is evident that the most solid advances in methods of teaching, the improved equipment, clinical and laboratory, and the kindlier spirit of generous rivalry—which formerly consisted in that debased counting of heads as a test of merit—all these advantages have come from a tightening of the bonds between the medical school and the University.

And lastly there are the State schools, of which this eollege is one of the few examples. It has been a characteristic of American Institutions to foster private industries and to permit private corporations to meet any demands on the part of the public. This idea carried to extreme allowed the unrestricted manufacture—note the term—of doctors, quite regardless of the qualifications usually though necessary in civilized communities—of physicians who may never have been inside a hospital ward, and who had after graduation to learn medicine somewhat in the fashion of the Chinese doctors who recognized the course of the arteries of the body, by noting just where the blood spurted when the acupuncture needle

was inserted. So far as I know State authorities have never interfered with any legally instituted medical school, however poorly equipped for its work, however lax the qualifications for license. Not only has this policy of non-intervention been carried to excess, but in many states a few physicians of any town could get a charter for a school without giving guarantees that laboratory or clinical facilities would be available. This anomalous condition is rapidly changing, owing partly to a revival of loyalty to higher ideals within our ranks, and partly to a growing appreciation in the public of the value of physicians thoroughly educated in modern methods. A practical acknowledgment of this is found in the recognition in three States at least of medicine as one of the technical branches to be taught in the University supported by the people at large.

But it is a secondary matter, after all, whether a school is under state or University control, whether the endowments are great or small, the equipments palatial or humble, the fate of an institution rests not on these; the inherent, vital element, which transeends all material interests, which may give to a school glory and renown in their absence, and lacking which all the "pride, pomp and circumstance" are vain-this vitalizing element, I say, lies in the men who work in its halls, and in the ideals which they cherish and There is a passage in one of John Henry Newman's Historical Sketches, which expresses this feeling in terse and beautiful language, "I say then that the personality of the teacher is able in some sort to dispense with an academical system, but that the system cannot in any way dispense with personal influence. With influence there is life, without it there is none; if influence is deprived of its true position it will not by those means be got rid of, it will only break out irregularly, dangerously. An academical system without the personal influence of teachers upon pupils is an Arctic winter; it will create an ice-bound, petrified, cast-iron University, and nothing else."

Naturally from this standpoint the selection of teachers is the function of the highest importance in the Regents of a University. Owing to local conditions the choice of men for certain of the chairs is restricted to residents in the University town, as the salaries in most schools of this country have to be supplemented by outside work. But in all departments this principle should be acknowledged and acted upon by trustees and faculties, and supported by public opinion-that the very best men available should receive appointments. It is gratifying to note the broad liberality displayed by American eolleges in welcoming from all parts teachers who may have shown any special fitness, emulating in this respect the liberality of the Athenians, in whose porticoes and lecture halls the stranger was greeted as a citizen and judged by his mental gifts alone. Not the least by any means of the object lessons taught by a great University is that literature and seience know no country, and, as has been well said, acknowledge 'no sovereignty but that of mind, and no nobility but that of genius.' But it is difficult in this matter to guide public opinion and the Regents have often to combat, and meet with firmness, a provincialism which is as fatal to the highest development of a University as is the shibboleth of a sectarian institution. No taint of this vice is here apparent, nor does it appear in your sister State Universities, which have medical faculties. Michigan has displayed a notable freedom from this spirit in the appointments to chairs in the medical faculty, and, if I remember aright, the last three nominations were from London, Philadelphia, and Galveston. 1 So also in the newly organized medical faculty of the State University of Texas, a wide freedom of choice was shown and the best men were ehosen, irrespective of race or country.

<sup>&</sup>lt;sup>1</sup> And not only in this respect is Michigan an example. She has earned the gratitude of every lover of higher education by first making compulsory a four-year curriculum. Harvard has followed this session, and the University of Pennsylvania begins next year. We now have first, second and third class schools, corresponding to the four, three and two session colleges.

### II.

The function of the teacher, to paraphrase the words of Matthew Arnold, is to teach and to propagate the best that is known and taught in the world. To teach the current knowledge of the subject he professes—sifting, analyzing, assorting, laying down principles. To propagate; i. e., to multiply, facts on which to base principles—experimenting, searching, testing. The best that is known and taught in the world—nothing less can satisfy a teacher worthy of the name, and upon us of the medical faculty lies a bounden duty in this respect, since our Art, coördinate with human suffering, is cosmopolitan.

There are two aspects in which we may view the teacher, as a worker and instructor in science, and as practitioner and professor of the art; and these correspond to the natural division of the faculty into the medical school proper and the hospital.

In this eminently practical country the teacher of science has not yet received full recognition, owing in part to the great expense connected with his work, and in part to carelessness or ignorance in the public as to the real strength of To equip and maintain separate Laboratories in a nation. Anatomy, Physiology, Chemistry (physiological and pharmacological), Pathology and Hygiene, to employ skilled teachers, who shall spend all their time in study and instruction, requires a capital not to-day at the command of any medical school in the land. There are fortunate ones with two or three departments well organized, not one with all. In contrast, Bavaria, a kingdom of the German Empire, with an area less than this state, and a population of five and a half millions, supports in its three University towns flourishing medical schools with extensive laboratories, many of which are presided over by men of world-wide reputation, the steps of whose doors are worn in many eases by cis-Atlantic students seeking the wisdom of methods and the virtue of inspiration not easily accessible at home. But there were professors in Bavarian medical

schools before Marquette and Joliet had launched their canoes on the great stream which the intrepid La Salle had discovered, before Du Luth met Father Hennepin below the falls of St. Anthony; and justice compels us to acknowledge that in the winning of an empire from the back-woods the people of this land had other things to think of, more urgent needs than laboratories of research. All has now changed. In this state, for example, the phenomenal growth of which has repeated the growth of the nation, the wilderness has been made to blossom as the rose, and the evidences of wealth and prosperity on every side almost constrains one to break out into the now old song, "Happy is that people that is in such a case."

But in the enormous development of material interests there is danger lest we miss altogether the secret of a nation's life, the true test of which is to be found in its intellectual and moral standards. There is no more potent autidote to the corroding influence of mammon than the presence in a community of a body of men devoted to science, living for investigation, and caring nothing for the lust of the eyes and the pride of life. We forget that the measure of the value of a nation to the world is neither the bushel nor the barrel, but mind; and that wheat and pork, though useful and necessary, are but dross in comparison with intellectual products which alone are imperishable. The kindly fruits of the earth are easily grown; the finer fruits of the mind are of slow growth, and require prolonged culture.

Each one of the scientific branches to which I have referred has been so specialized that even to teach it takes more time than can be given by a single Professor, and the laboratory classes demand skilled assistance. The aim of a school should be to have these departments in the charge of men who have; first, enthusiasm, that deep love of a subject, that desire to teach and extend it, without which all instruction becomes cold and lifeless; second, a full personal knowledge of the branch taught, not a second-hand information derived from books, but the living experience derived from experimental

rds of that is mowlorting, ltiply, ching,

orld e, and n this is cos-

r, as a
l provision
spital.
cience
o the
carecth of

es in crmaeachetion, edical

trast,
a less
ions,
dical

wiscces-

dical

and practical work in the best laboratories. This type of instructor is fortunately not rare in American schools. well-grounded students who have pursued their studies in England and on the Continent have added depth and breadth to our professional scholarship, and their critical faculties have been sharpened to discern what is best in the world of medicine. It is particularly in these branches that we need teachers of wide learning, whose standards of work are the highest known, and whose methods are those of the masters in Israel. Third, men who have a sense of obligation, that feeling which impels a teacher to be also a contributor, and to add to the stores from which he so freely draws. And precisely here is the necessity to know the best that is taught in his branch, the world over. The investigator to be successful must start abreast of the knowledge of the day, and he differs from the teacher, who, living in the present, expounds only what is current, in that his thoughts must be in the future, and his ways and work in advance of the day in which he lives. Thus, unless a bacteriologist has studied methods thoroughly and is familiar with the extraordinarily complex flora associated with healthy and diseased conditions, and keeps in touch with every laboratory of research at home and abroad, he will, in attempting original work, find nimself exploring ground already well known, and will probably burden an already over-laden literature with faulty and crude observations. avoid mistakes he must know what is going on in the laboratories of England, France, and Germany, as well as in those of his own country, and he must receive and read six or ten journals devoted to the subject. The same need for wide and accurate study holds good in all branches.

Thoroughly equipped laboratories in charge of men thoroughly equipped as teachers and investigators is the most pressing want to-day in the medical schools of this country.

The teacher as a professor and practitioner of his art is more favored than his brother, of whom I have been speaking; he is more common, too, and less interesting; though in the

eyes of "the fool multitude who choose by show" more important. And from the standpoint of medicine as an art for the prevention and cure of disease, the man who translates the hieroglyphics of science into the plain language of healing is certainly the more useful. He is more favored in as much as the laboratory in which he works, the hospital, is a necessity in every centre of population. The same obligation rests on him to know and to teach the best that is known and taught in the world-on the surgeon the obligation to know thoroughly the scientific principles on which his art is based, to be a master in the technique of his handicraft, ever studying, modifying, improving; -on the physician, the obligation to study the natural history of diseases and the means for their prevention, to know the true value of regimen, diet, and drugs in their treatment, ever testing, devising, thinking;and upon both, to teach to their students habits of self-reliance and to be to them examples of gentleness, forbearance, and courtesy in dealing with their suffering brethren.

I would fain dwell upon many other points in the relation of the hospital to the medical school—on the necessity of ample, full and prolonged clinical instruction, and the importance of bringing the student and the patient into close contact; not the cloudy knowledge of the amphitheatre, but the accurate, critical knowledge of the wards; on the encouragement of the younger men as instructors and helpers in ward work and upon the duty of hospital physicians and surgeons to contribute to the advance of their art—but I pass on with an illusion to a very delicate matter in college faculties.

From one who, like themselves, has passed la crise de quarante ans, the seniors present will pardon a few plain remarks upon the disadvantages to a school of having too many men of mature, not to say, riper years. Insensibly in the fifth and sixth decades there begins to creep over most of us a change, noted physically among other ways in the silvering of the hair and that lessoning of elasticity, which impels a man to open rather than to vault a five-barred gate. It comes to all sooner

or later, to some only too painfully evident, to others unconsciously, with no pace perceived. And with most of us this physical change has its mental equivalent, not necessarily accompanied by loss of the powers of application or of judgment; on the contrary, often the mind grows clearer and the memory more retentive, but the change is seen in a weakened receptivity and in an inability to adapt oneself to an altered intellectual environment. It is this loss of mental clasticity which makes men over forty so slow to receive new truths. Harvey complained in his day that few men above this critical age seemed able to accept the doctrine of the circulation of the blood, and in our own time it is interesting to note how the theory of the bacterial origin of certain diseases has had as other truths to grow to acceptance with the generation in which it was announced. The only safeguard in the teacher against this lamentable condition is to live in, and with the third decade, in company with the younger, more receptive, and progressive minds.

There is no sadder picture than the Professor who has outgrown his usefulness, and, the only one unconscious of the fact, insists, with a praiseworthy zeal, upon the performance of duties for which the circumstances of the time have rendered him unfit. When a man nor wax nor housey can bring home, he should, in the interests of an institution, be dissolved from the hive to give more laborers room; though it is not every teacher who will echo the sentiment

"Let me not live . . . . After my flame lacks oil to be the snuff Of younger spirits whose apprehensive senses All but new things disdain."

As we travel farther from the East our salvation lies in keeping our faces towards the rising sun, and in letting the fates drag us, like Cacus his oxen, backwards into the cave of oblivion.

And let me conclude this portion of my address with a few practical observations. It is useless to disguise from the public

or ourselves that a first class medical school well equipped in all details, is an enormously expensive affair; but in this State, and with a population of nearly half a million centered in and about this twin-city, you can look forward with confidence to a consummation of your utmost hopes. Let me indicate how much you will require from the State or your friends—or both—during the next twenty-five years. Six laboratories in the scientific branches with the necessary apparatus will cost not less than \$200,000. Radiating from a central building, which contains the general lecture room, library and museum, they would be less expensive than separate Institutes, as in the German Universities. To provide salaries for the men in charge-men who know the best that is known and taught in the worldwill take, with students' fees, between four and five hundred thousand dollars, paying at the rate of from four to five thousand dollars a year. The hospital department must be in proportion, and in modern operating rooms, separate pavilion wards and clinical laboratories another two hundred thousand dollars may be spent. Were I asked what should be the cost of the equipment of a first-class, modern, medical school, one of a kind such as exists in half a dozen German towns, (any one of which would go in a ward of this city), I would say one million dollars—not less, and perhaps a little more.

Where now shall we look for those liberal endowments? Can we reasonably expect them for the medical schools of this country? Yes, the flowing tide, so long with the Arts and with Theology, is with us. It is a cheery indication here that State support has not paralyzed private beneficence, and that some of your wealthy men recognize among the pleasures of life the blessedness of giving. May many more learn the secret of the only way to perpetuate a name in this country! Senatorships are not hereditary, and it is notorious that great wealth cannot stand the pace of the third generation. There is a serious danger, too, that in the Democracy of the future the general average will be so high that oblivion will cover all but a chosen few, a poet here and there, 'born for the Universe,'

and the capitalists, who, like Johns Hopkins and Cornell, have linked their names with the imperishable things—names which in the centuries to come may attain the sweet savor of sanctity which to-day lingers on the tongue as we utter the words Harvard and Yale.

#### III.

Students of Medicine, Children of the Guild, with whom are the promises, and in whom centre our hopes—let me congratulate you on the choice of a calling which offers a combination of intellectual and moral interests found in no other profession, and not met with at all in the common pursuits of life—a combination which, in the words of Sir James Paget, "offers the most complete and constant union of those three qualities which have the greatest charm for pure and active minds—novelty, utility, and charity." But I am not here to laud our profession; your presence on these benches is a guarantee that such praise is superfluous. Rather allow me, in the time remaining at my disposal, to talk of the factors which may make you good students—now in the days of your pupilage, and hereafter when you enter upon the more serious studies in which the physician finds himself engaged.

In the first place acquire early the Art of Detachment, by which I mean the faculty of isolating yourselves from the pursuits and pleasures incident to youth. By nature man is the incarnation of idleness, which quality alone, amid the ruined remnants of Edenic characters, remains in all its primitive intensity. Occasionally we do find an individual who takes to toil as others to pleasure, but the majority of us have to wrestle hard with the original Adam, and find it no easy matter to scorn delights and live laborious days. Of special importance is this gift to those of you who reside for the first time in a large city, the many attractions of which offer a serious obstacle to its acquisition. The discipline necessary to secure this art brings in its train habits of self-

control and forms a valuable introduction to the sterner duties of life.

I need scarcely warn you against too close attention to your studies. I have yet to meet a medical student, the hey-dey in whose blood had been quite tamed in his college days; but if you think I have placed too much stress upon isolation in putting the Art of Detachment first in order among the desiderata let me temper the hard saying by telling you how with "labors assiduous due pleasure to mix." Ask of any active business man or a leader in a profession the secret which enables him to accomplish much work, and he will reply in one word, system; or as I shall term it, the Virtue of Method, the harness without which only the horses of genius travel. There are two aspects of this subject; the first relates to the orderly arrangement of your work, which is to some extent enforced by the roster of demonstrations and lectures, but this you would do well to supplement in private study by a schedule in which each hour finds its allotted Thus faithfully followed day by day system may become at last engrained in the most shiftless nature, and at the end of a semester a youth of moderate ability may find himself far in advance of the student who works spasmodically, and trusts to cramming. Priceless as this virtue is now in the time of your probation it becomes in the practising physician an incalculable blessing. The incessant and irregular demands upon a busy doctor make it very difficult to retain, but the public in this matter can be educated, and the men who practise with system, allotting a definite time of the day to certain work, accomplish much more and have at any rate a little leisure; while those who are unmethodical never catch up with the day's duties and worry themselves, their confreres, and their patients. In one respect, too, the unsystematic physician is absolutely criminal. By the great law of contraries there is sure to be assigned to him to wife some gentle creature to whom order is the supreme law, whose life is rendered miserable by the vagaries of a man, the dining-room

table in whose house is never "cleared," and who would an he could "breakfast at five o'clock tea and dine on the following day."

The other aspect of method has a deeper significance, hard for you to reach, not consoling when attained, since it lays bare our weaknesses. The practice of medicine is an art, based on science. Working in science, with science, for science, it has not reached, perhaps never will, the dignity of a complete science like astronomy or engineering, with exact laws. Is there then no science of medicine? Yes, but in parts only, such as anatomy and physiology, and the extraordinary development of these branches during the present century has been due to the cultivation of method, by which we have reached some degree of exactness, some certainty of truth. Thus we can weigh the secretions in the balance and measure the work of the heart in foot-pounds. The deep secrets of generation have been revealed and the sesame of evolution has given us fairy tales of science more enchanting than the Arabian Nights entertainment. With this great increase in our knowledge of the laws governing the processes of life, has been a corresponding, not less remarkable, advance in all that relates to life in disorder, that is, disease. The mysteries of heredity are less mysterious, the operating room has been twice over robbed of its terrors; the laws of cpidemics are known, and the miracle of the threshing floor of Araunah, the Jebusite, may be repeated in any town out of Bumbledom. All this change has come about by the observation of facts, by their classification, and by the founding upon them of general laws. Emulating the persistence and care of Darwin we must collect facts with open-minded watchfulness, unbiassed by crotchets or notions; fact on fact, instance on instance, experiment on experiment, facts which fitly joined together by some master who grasps the idea of their relationship may establish a general principle. But in the practice of medicine, where our strength should be lies our great weakness. Our study is man, as the subject of accidents and diseases.

Were he always, inside and outside, cast in the same mould, instead of differing from his fellow man as much in constitution and in his reaction to stimuli as in feature, we should ere this have reach some settled principles in our art. And not only are the reactions themselves variable, but we, the doctors, are so fallible, ever beset with the common and fatal facility of reaching conclusions from superficial observations, and eonstantly misled by the case with which our minds fall into the

rut of one or two experiences.

an

the

 $\mathbf{rd}$ 

ys

ed

it

ete

 $\mathbf{Is}$ 

у,

rу

ry

ve

h.

re

οf

n

e

 $\mathbf{n}$ 

11

n

And thirdly add to the Virtue of Method, the Quality of Thoroughness, an element of such importance that I had thought of making it the only subject of my remarks. Unfortunately, in the present arrangement of the curriculum, few of you as students can hope to obtain more than a measure of it, but all can learn its value now, and ultimately with patience become living examples of its benefit. Let me tell you briefly what it means. A knowledge of the fundamental sciences upon which our art is based—chemistry, anatomy, and physiology-not a smattering, but a full and deep acquaintance, not with all the facts, that is impossible, but with the great principles based upon them. You should, as students, become familiar with the methods by which advances in knowledge are made, and in the laboratory see clearly the paths the great masters have trodden, though you yourselves cannot walk therein. With a good preliminary training and a due apportioning of time you can reach in these three essential studies a degree of accuracy which is the true preparation for your life duties. It means such a knowledge of diseases and of the emergencies of life and of the means for their alleviation, that you are safe and trustworthy guides for your fellow-men. You cannot of course in the brief years of pupilage so grasp the details of the various branches that you can surely recognize and successfully treat all cases. But here if you have mastered certain principles is at any rate one benefit of thoroughness-you will avoid the sloughs of charlatanism. Napoleon, according to Sainte Beuve, one day said when

somebody was spoken of in his presence as a charlatan, "Charlatan as much as you please but where is there not charlatanism?" Now thoroughness is the sole preventive of this widespread malady, which in medicine is not met with only outside of the profession. Matthew Arnold, who quotes the above from Sainte Beuve, defines charlatanism as the "confusing or obliterating the distinctions between excellent and inferior, sound and unsound or only half sound, true and untrue or only half true." The higher the standard of education in a profession the less marked will be the charlatanism, whereas no greater incentive to its development can be found than in sending out from our colleges men who have not had mental training sufficient to enable them to judge between the excellent and the inferior, the sound and the unsound, the true and the half true. And if we of the household are not free from the seductions of this vice, what of the people among whom we work? From the days of the sage of Endor, even the rulers have loved to dabble in it, while the public of all ages have ever revelled in its methods-to-day, as in the time of the Father of Medicine, one of whose contemporaries (Plato) thus sketches this world-old trait; "And what a delightful life they lead! they are always doctoring and increasing and complicating their disorders and always fancying that they will be cured by any nostrum which anybody advises them to try."

The Art of Detachment, the Virtue of Method, and the Quality of Thoroughness may make you students, in the true sense of the word, successful practitioners, or even great investigators; but your characters may still lack that which can alone give permanence to powers—the Grace of Humility. As the divine Italian at the very entrance to Purgatory was led by his gentle Master to the banks of the island and girt with a rush, indicating thereby that he had cast off all pride and self-conceit, and was thus prepared for his perilous ascent to the realms above, so should you, now at the outset of your journey take the reed of humility in your hands, in token that you appreciate the length of the way, the difficulties to

be overcome, and the fallibility of the faculties upon which you depend.

In these days of aggressive self-assertion, when the stress of competition is so keen and the desire to make the most of oneself so widespread, it may seem a little old-fashioned to preach the necessity of this virtue, but I insist for its own sake, and for the sake of what it brings, that a due humility should take the place of honor on the list. For its own sake, since with it comes not only a reverence for truth, but also a proper estimation of the difficulties encountered in our search for it. More perhaps than any other professional man, the doctor has a curious-shall I say morbid?-sensitiveness to (what he regards) personal error. In a way this is right; but it is too often accompanied by a cocksureness of opinion (to use a Johnsonian word) which, if encouraged, leads to so lively a conceit that the mere suggestion of mistake under any circumstances is regarded as a reflection on his honor, a reflection equally resented whether of lay or of professional origin. Start out with the conviction that absolute truth is hard to reach in matters relating to our fellow creatures, healthy or diseased, that slips in observation are inevitable even with the best trained faculties, that errors in judgment must occur in the practice of an Art which is largely the balancing of probabilities;—start, I say, with this attitude of mind, and mistakes will be acknowledged and regretted; but instead of a slow process of self-deception, with ever-increasing inability to recognize truth, you will draw from your errors the very lessons which may enable you to avoid their repetition.

And for the sake of what it brings, this Grace of Humility is a precious gift. When to the sessions of sweet silent thought you summon up the remembrance of your own imperfections, the faults of your brothers will seem less grievous, and you will, to use the quaint language of Sir Thomas Browne, "allow one eye for what is laudable in them." The wrangling and unseemly disputes which have too often disgraced our profession arise in a great majority of cases, on the one

hand, from this morbid sensitiveness to the confession of error, and, on the other, from a lack of brotherly consideration, and a convenient forgetfulness of our own failings. Take to heart the words of the son of Sirach, winged words to the sensitive souls of the sons of Esculapins, "Admonish a friend, it may be he has not done it; and if he have done it, that he do it no more. Admonish thy friend, it may be he hath not said it; and if he have, that he speak it again. Admonish a friend, for many times it is a slander, and believe not every tale." Yes, many times it is a slander and believe not every tale.

The truth that lowliness is young ambition's ladder is hard to grasp, and when accepted harder to maintain. It is so difficult to be still amidst bustle, to be quiet amidst noise; yet, "es bildet ein Talent sich in der Stille" alone, in the calm life necessary to continuons work for a high purpose. The spirit abroad at present in this country is not favorable to this Teutonic view, which galls the quick apprehension and dampens the enthusiasm of the young American. All the same, it is true and irksome at first though the discipline may be, there will come a time when the very fetters in which you chafed shall be a strong defence and your chains a robe of glory.

Sitting in Lincoln Cathedral and gazing at one of the loveliest of human works, as the Angel Choir has been described, there arose within me, obliterating for the moment the thousand heraldries and twilight saints and dim emblazonings, a strong sense of reverence for the minds which had conceived and the hands which had executed such things of beauty. What manner of men were they who could, in those (to us) dark days, build such transcendent monuments? What was the secret of their art? By what spirit were they moved? Absorbed in thought I did not hear the beginning of the music, and then as a response to my reverie and arousing me from x, rang out clear the voice of the boy leading the anti-

phon "That thy power, thy glory and mightiness of thy kingdom might be known into men." Here was the answer. Moving in a world not realized these men sought, however feebly, to express in glorious structures their conception of the beauty of holiness, and these works, our wonder, are but the outward and visible signs of the ideals which animated them.

Practically to us in very different days life offers the same problems, but the conditions have changed, and, as happened before in the world's history, great material prosperity has weakened the influence of ideals, and blurred the eternal difference between means and end. Still, the ideal State, the ideal Life, the ideal Church—what they are and how best to realize them—such dreams continue to haunt the minds of men, and who can doubt that their contemplation immensely fosters the upward progress of our race? We, too, as a profession, have cherished standards, some of which, in words sadly disproportionate to my subject, I have attempted to portray.

My message is chiefly to you, Students of Medicine, since with the ideals entertained now your future is indissolubly The choice lies open, the paths are plain before you. Always seek your own interests, make of a high and sacred calling a sordid business, regard your fellow creatures as so many tools of trade, and if riches are your heart's desire they may be yours; but you will have bartered away the birthright of a noble heritage, traduced the well-deserved title of the physician as the Friend of Man, and falsified the best traditions of an ancient and honorable Guild. On the other hand I have tried to indicate some of the ideals which you may reasonably cherish. No matter though they are paradoxical in comparison with the ordinary conditions in which you work, they will have, if encouraged, an ennobling influence, even if it be for you only to say with Rabbi Ben Ezra, "what I aspired to be and was not, comforts me." And though this course does not necessarily bring position or

renown, consistently followed it will at any rate give to your youth an exhilarating zeal and a cheerfulness which will enable you to surmount all obstacles—to your maturity a serene judgment of men and things, and that broad charity without which all else is naught—to your old age that greatest of all blessings, peace of mind, a realization, maybe, of the prayer of Socrates for beauty in the inward soul and for unity of the outer and the inner man; a fulfilment, perhaps, of the promise of St. Bernard, "pex sine crimine, pax sine turbine, pax sine rixa."



