

ARTICLE IV.

MODERN MEDICINE:

ITS NEED AND ITS TENDENCY.

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READ AT THE ANNUAL MEETING, MAY 25, 1870.*

MR. PRESIDENT AND FELLOWS
OF THE MASSACHUSETTS MEDICAL SOCIETY:—

THE spirit of inquiry, which is a marked characteristic of the present century, is pervading every branch of human knowledge. No creed, opinion, or formula of belief, however sacred and time-honored, escapes its questionings. It interrogates existing dogmas, theories, and institutions, and boldly demands their credentials. It lets in the light of day upon shams, sophistries and baseless speculations, and exposes their hollowness or absurdity. At times it is irreverent. Unawed by eminent gravity or pretentious respectability, it rudely penetrates the solemn mystery which enshrouds venerable idols, and

* At an Adjourned Meeting of the Mass. Medical Society, held Oct. 3, 1860, it was

Resolved, "That the Massachusetts Medical Society hereby declares that it does not consider itself as having endorsed or censured the opinions in former published Annual Discourses, nor will it hold itself responsible for any opinions or sentiments advanced in any future similar discourses."

Resolved, "That the Committee on Publication be directed to print a statement to that effect at the commencement of each Annual Discourse which may hereafter be published."

without ceremony unmasks or dethrones them. Modern investigators have no undue respect for the traditions of the past. They have ceased to regard potent, grave and reverend seniors as of necessity "very noble and approved good masters." In place of reverence and veneration, they have substituted observation and analysis. So little are they affected by what once profoundly impressed the minds of men, that a French savant has expressed his conviction, that even the Roman Senate, that most august of human assemblies, would not have unnerved him.

The results of this spirit of the times, which some regard as beneficent, others as pernicious, may be seen in all directions. Theology has received rough usage. Its salient points have been sharply attacked, its prominent doctrines have been boldly assailed by logic, sarcasm and ridicule. So earnestly and successfully has the warfare been waged, that many excellent but timid persons have feared that the foundations of religion itself were becoming undermined. In politics, the last decade in this country seems like a century. The abolition of slavery, and its fitting supplement, the adoption of the fifteenth amendment to the Constitution, are events which prove that the world moves, and that humanity advances.*

The rights of man having been assured, the rights

* It is with grief and humiliation, as members of a liberal profession, that we find the American Medical Association, assembled at the National Capital, in this year of our Lord 1870, interposing a puny effort to arrest the progress of events, and to set back the clock of time. Such a procedure calls forcibly to mind the memorable contest, so graphically depicted by Sidney Smith, between Mrs. Partington and the Atlantic Ocean.

of woman are engaging public attention; and questions concerning the sphere of woman, female suffrage, and the true relation of the sexes, are now in the full tide of successful discussion. In Biology, Darwin's theory of the origin of species by natural selection has survived the stage of ridicule, and seems to be gaining ground. In Physics, the old doctrine of the materiality of light, heat and electricity has passed away, and the great law of the conservation of force and the correlation of forces, one of the most grand and far-reaching generalizations ever achieved by science, appears to be established. In History, the work of demolition has been bravely going on. The "noble Brutus" has lost much of his nobility, and has become quite an ordinary conspirator; the early history of Rome, so long believed without question, has been proved to be fabulous; Xanthippe has ceased to be the typical scold, and turns out to be simply an average wife; even Judas Iscariot has found apologists; the story of William Tell is, in great part, a myth; and the pleasant little romance of Pocahontas and Capt. John Smith has vanished into thin air.

This radical tendency of the times, this disposition to look *into* things instead of looking *at* them, must, of course, affect the science of Medicine. In fact, of all sciences in the world, Medicine is perhaps the most open to attack. So much of it is uncertain and conjectural, that it offers a fair field in which men may exercise both their wit and their reason. It is probably, at the present day, passing through an ordeal more severe and searching than it has ever before

experienced. The present period in its history, as Dr. Aitken has truly said, "is one of *probation* as well as of *progress*." While, on the one hand, it is enriched, as at no former time, by the contributions of scientific inquiry and observation, on the other, its theory and practice are subjected to a remorseless criticism, which must needs expose their deficiencies, and reveal their short-comings. Especially the action of drugs, and their influence on disease, are undergoing a scrutiny, which must eventuate in essential modifications of existing modes of treatment.

It must be confessed that the manner in which the medical profession is regarded by the community at large is not such as in all respects to gratify our self-love, or to flatter our vanity. Physicians have from time immemorial been satirized and ridiculed. Poets, dramatists and novelists have considered them fair subjects for wit and sarcasm. If a physician be introduced into a play or a novel, he is commonly represented as a clown or a simpleton. Mr. Addison in the *Spectator* had the heart to write thus :—"If we look into the profession of Physic, we shall find a most formidable body of men. The sight of them is enough to make a man serious, for we may lay it down as a maxim that when a nation abounds in physicians it grows thin of people. This body of men in our country may be described like the British army in Cæsar's time. Some of them slay in chariots, and some on foot. If the infantry do less execution than the charioteers, it is because they cannot be carried so soon into all quarters of the town, and despatch so much business in so short a time."

Coleridge represents the devil as starting forth one morning from his brimstone bed "to visit his snug little farm the earth." In the course of his travels, sings the poet,

" He saw an apothecary on a white horse
Ride by on his vocations :
And the devil thought of his old friend
Death, in the Revelations."

The New-York Nation, a competent critic of course in such a matter, announces that medical "therapeutic literature resembles nothing so much as a farmer's almanac or a cook-book."

The eminent historian, the late Mr. William H. Prescott, in a letter, thought by his biographer to be worth publishing, thus expresses his sentiments towards the profession:—"I am delighted that you are turning a cold shoulder to Æsculapius, Galen, and tutti quanti. I detest the whole brotherhood. I have always observed that the longer a man remains in their hands, and the more of their cursed stuff he takes, the worse plight he is in. They are the bills I most grudge paying, except the bill of mortality, which is very often indeed sent in at the same time."*

* It is stated by one who knew him well and was occasionally consulted by him, that this letter was the morbid offspring of some dyspeptic moment and grossly misrepresents Mr. Prescott's real feeling. No one more anxiously consulted or more implicitly relied on his medical adviser, and no one more than he would have regretted to have a passing jest recorded as a deliberate opinion.

In the hour of peril, among the earliest to seek medical aid are those who, when at ease, were foremost in deriding it. As Byron says—

" physicians mend or end us,
Secundum artem: but although we sneer
In health—when ill we call them to attend us,
Without the least propensity to jeer."

In popular estimation, all who pretend to practise medicine, the regular, irregular, and defective, are grouped indiscriminately, and the motley crowd is regarded as composed of rival sects or parties, each contending for the mastery, and each entitled to a hearing. Much to our astonishment, and slightly to our annoyance, we find ourselves christened Allopathists, a name which we repudiate; and we are expected to enter the lists upon equal terms with a mushroom sect, which was born yesterday, and will die to-morrow, and to defend our claims to public recognition and regard. Believing, as we do, that we are the lineal descendants of the men who first raised medicine to the rank of a science, and that we rightfully belong to the noble company, who, in succeeding times, by their genius and labors have conferred on it whatever of worth and dignity it possesses, it is not surprising that we are sometimes disturbed at finding ourselves placed in the same category with sectarians and quacks, and that we are occasionally inclined to indulge in complaints against the injustice and stupidity of mankind.

It is well, however, in matters of this kind, to be governed by reason and not by feeling. It should be remembered that although the community, at times, seems disposed to undervalue our services, the medical profession proper has ever held, and still holds, a high place in the public regard, and that, in the long run, it is recognized as the true exponent of existing medical science. If we are ridiculed and satirized, we but share the fate of many a good man and good cause. If poets, essayists and occasionally historians

give utterance to sharp sayings, is it not thus written in the Book of Books?—

“Honor a physician with the honor due unto him for the uses which ye may have of him: for the Lord hath created him. The skill of the physician shall lift up his head: and in the sight of great men he shall be in admiration. Then give place to the physician: let him not go from thee, for thou hast need of him. There is a time, when in his hands there is good success.”

But if, after a careful review of the facts in the case, the conclusion is forced upon us, that there is in the public mind a lurking doubt as to the efficacy of medical art, will it not be well to inquire whether after all there may not be some ground for such a doubt, and a real cause for the seeming want of confidence in our professional skill.

With regard to the progress that has been made in many of the branches of our profession in past times, and especially during the last half century, it may safely be said, that as much has been accomplished as could reasonably be expected, when we take into account the difficulties which necessarily attend medical investigations. *Anatomy* seems to have nearly reached its culminating point. So carefully has every region of the human body been examined, and so minutely and accurately has its complicated structure been described, that much farther progress in this department, without the aid of the microscope, is hardly to be expected. As a proof, however, that the whole field of *Anatomy* has not yet been gleaned, may be cited the recent discovery,

by Prof. Henry J. Bigelow, of the Y ligament, so called, and its relations to dislocations at the hip-joint. We call this a discovery in Anatomy, as well as an important contribution to Surgery ; for although a partial description of this ligament has been heretofore given in anatomical works, yet never before had its peculiar conformation and special-uses been comprehended and appreciated. Chemistry has become a new science. A treatise on this branch, published fifty years ago, is chiefly valuable as a curiosity, or as a relic of the past. Physiology is in a transition state ; but recent investigators, by the boldness and zeal with which they are carrying on their work, and the brilliant results which have already crowned their labors, have indicated what may be expected in the future. Auscultation has thrown a flood of light upon the diagnosis of thoracic diseases, and so clear and important are its revelations, that we sometimes wonder how the world did without it so long. Surgery having enlisted in its service the anæsthetic power of sulphuric ether, is achieving new triumphs and gaining new laurels. Pathology aided by the microscope, and investigated by Virchow, Rokitansky, Paget, Jackson, and a host of others, has vindicated for itself a high position. In spite of the doubts of the sceptic, and the sneers of the scoffer, and notwithstanding its acknowledged deficiencies in certain directions, Medicine, as a whole, occupies a high rank among the sciences, and can lay claim to an honorable parentage and history. Let any one attempt a thorough acquaintance with either of the departments which have been named, and he

will find work enough to occupy his leisure hours for an ordinary life-time. Dr. James Jackson has pithily remarked, "Imperfect as the healing art is, be assured of this, no one man knows all that is *known* respecting it."

But while Medicine, as a whole, can be shown to have kept pace with other branches of human inquiry, Therapeutics, obviously, have not kept pace with other departments of Medicine. The treatment of diseases, that part of it, especially, which relates to the administration of drugs, is not in a satisfactory condition, and is not creditable to the medical science of the nineteenth century.

There is a well-marked and clearly defined line between Medicine and Surgery. The specialties, so called, belong, for the most part, to the latter, rather than to the former. The present discussion relates chiefly to Medicine proper.

Physicians cannot justly be charged with having neglected to use medicines in sufficient quantity, or in a sufficient variety. The seventeen hundred closely printed pages of the United States Dispensatory, and the concurrent testimony of mankind, will triumphantly acquit them of any such charge. The blame, if blame there be, lies in a different direction, and results from the apparent fact, that the custom is too prevalent among them of administering, after a prescribed routine, drugs of every kind, singly and in combination—without sufficient evidence, that, in so doing, they are benefiting their patients, but with full evidence that they are inflicting upon them much present suffering. Medicines are not negative sub-

stances : if they do no good, they usually do harm ; they should not be given, unless clearly indicated, and should not be persevered in unless they are in some degree fulfilling the purpose for which they are prescribed. It is to be feared that this rule is not always borne in mind ; that medicines are often given at hap-hazard, when it would be better to withhold them ; that cures are sometimes ascribed to them, in producing which they have little or no agency ; that not infrequently they interfere with, or interrupt, the " succession of processes " whose natural tendency may be to a recovery ; that, in fine, they are often used in an unscientific manner, without reason or against reason, in conformity with the whim or chance-thought of him who dispenses them.

The present confused and unsatisfactory state of the science of Therapeutics must be ascribed in part, at least, to the loose, careless and thoughtless manner of administering drugs, which has prevailed largely in times past, and which is not obsolete even now. While appreciating the difficulties which lie in the way of estimating the exact effect of medicines upon disease, the conviction has forced itself upon many minds, not only that these difficulties have never been fairly met, but that the importance of meeting and overcoming them has not been fully realized, and that, in consequence, the sick man has suffered. Be this as it may, the treatment of disease is the weak spot in our profession, against which the arrows of the adversary are aimed with most effect. Justly or unjustly, there is an impression abroad, that medical treatment is not always of the greatest

value ; and the fact that a large proportion of sick people do recover under any treatment, and under no treatment, leads many persons to undervalue the resources of medical art, as well as the skill of the medical man.

Is it an exaggeration to say that the want of clear and exact knowledge, which exists, even in our day, as to the effects of medicinal agents in the treatment of disease, is a great evil, which calls loudly for reform ? Examine some of the works of established reputation, on the theory and practice of medicine. Take, for instance, Copland's Medical Dictionary, printed by this Society for the instruction and edification of its members, during the quarter of a century commencing in 1834 and ending in 1859. The description, causes and pathological anatomy of the various diseases are generally well given : but what a medley are the rules for treatment ! Would a student in medicine, or a young physician, fresh from the study of this encyclopedic work, when called to his first case, after making out his diagnosis, have any definite idea as to what ought to be done ? Would not emetics, cathartics, diaphoretics and mercurials rise like spectral illusions, and dance before his bewildered eyes in fearful disorder ? And should an older and more experienced practitioner have occasion to consult this venerable compendium for light and guidance, might not the information he would gain in regard to treatment be condensed into this general formula : Attack vigorously every disease you may encounter, with every remedy at your command ?

The amount and kind of medication to which the author of a popular, and in many respects a valuable, treatise on the Diseases of Children (Dr. Condie) would subject the rising generation, are appalling. We often read of the dangers which encompass the path of inexperienced and unsuspecting youth : these dangers are in truth real and imminent. Take, as an illustration, Hooping Cough. In this disease, which all children are expected to have, twenty or more active medicines are recommended, to say nothing of such gentle auxiliaries as venesection, blisters, tartar emetic ointment, and frictions with turpentine. In contrast with these fearful prescriptions, stand the teachings of Dr. Jacob Bigelow, certainly one of our wisest and most experienced physicians, originally uttered thirty-five years ago, and repeated twenty years after. They read thus :—“ Under the simple self-limited diseases we may class hooping cough. This disease has its regular increase, height and decline, occupying ordinarily, from one to six months, but, in some mild cases, only two or three weeks. During this period, medical treatment, for the most part, is of no avail. Narcotic appliances may diminish the paroxysm, but without abridging the disease.” Niemeyer, like Dr. Bigelow, is very chary in the use of drugs in this disease, advising simply soda-water and narcotics, with an occasional emetic in extraordinary cases. He has faith in the efficacy of a “ slight but continued perspiration ” in the early stages ; but the most remarkable feature in his treatment is the recommendation that the child should be directed to cease from coughing as

soon as possible, and that this harsh demand should be enforced "with wholesome sternness and severity." He quotes with apparent approval the opinion expressed "by the wife of a Prussian general, a most determined woman, but an equally tender mother, that hooping cough was only curable by the rod!" These views of eminent men, in relation to the management of a very common disease, are certainly unlike, and it is important to know which plan of treatment, if either, is correct.

Acute Rheumatism is usually supposed to require prompt and active treatment. Venesection, mercurials, colchicum, lemon juice, alkalies of all kinds and in large doses; all these, with divers other remedies, have from time to time been recommended, and have been supposed by their respective advocates to have great influence in jugulating the disease. But, one by one, they have fallen into disuse, while rheumatism goes on tormenting its victims, as in the days of old. Latterly, some bold men have ventured to treat rheumatism without drugs. In a report of cases thus treated in the London hospitals by Drs. Gull and Sutton, the authors, after giving the details and statistics, sum up thus:—"Our cases appear to teach that the rheumatic process runs its course under the expectant treatment, as favorably as under the treatment by drugs."*

In the Dublin Quarterly, Dr. Beatty and Dr. Stokes publish their experience. Dr. Beatty was afflicted in his own person. He had the care and attendance

* A similar result had been obtained previously in this country.—See *Communications Mass. Med. Soc.*, Vol. x., No. v., p. 387. 1865.

of the most eminent physicians in Dublin. A variety of treatment was of course pursued. "But," says Dr. Beatty, "sad experience compels me to say that in no instance did medicine appear to have any effect in controlling or shortening the disease." Dr. Stokes disbelieves in any of the proposed specific treatments, and says, "the disease, like continued fever, will run its course."

Is it not time, we ask in all earnestness, that some order should be brought out of this confusion? Is it not time that the question were settled, whether drugs are really of use in controlling rheumatism? When acids and alkalies are both urged as specifics in the same disease, may it not be a fair inference that neither is of much account?

In regard to Syphilis, and its treatment by mercury, the views of eminent syphilographers may perhaps be condensed into the following statements:—

1. Mercury is not a specific in syphilis, but it is the best remedy we possess; it relieves the symptoms: but the disease remains, and the symptoms may return.

2. Mercury is a specific in syphilis, and will cure it by removing its cause, *i. e.* the virus. Every effort should be made to produce actual cure by prolonged mercurial treatment.

3. Mercury is not a specific, and ought not to be used at all, in syphilis. A tonic treatment is the only proper one, and the apparent cures from mercury are due to its having been used in connection with tonics.

It may be added, that while the weight of testi-

mony is in favor of the use of mercury in some form, its advocates are not agreed as to the proper time or dose of the remedy, nor the special way in which it should be given.

Dr. Anstie, in a recent number of the Practitioner, sums up the latest results of treatment in cholera, thus :—“The hygiene of the future may exterminate cholera in its Indian birth-place. But for actual cholera patients, as long as such are found, we cannot yet pride ourselves on being able to do very much.”

These illustrations might be multiplied, but this is not necessary. The purpose in introducing them is simply to indicate the direction in which special effort is required.

The great NEED in Medicine, at the present time, is clinical study. Whatever else be done, or be left undone, the treatment of disease should be thoroughly investigated, and the effects of drugs and medicinal applications in modifying or relieving it should be carefully tested.

Clinical study of course includes diagnosis as well as treatment. Correct diagnosis is the only sure basis for correct treatment. Our first duty is to find out what ails our patient, and then to cure or relieve him if we can. We can hardly overrate the importance of diagnosis. The difference is great between lumbar abscess and chronic rheumatism; yet one has been mistaken for the other. There may be points of resemblance between hysteria and organic disease of the brain; but it will not redound to the credit of a physician to confound the two. Possibly, some

remedies, which have had their day and are now forgotten, originated with persons who mistook the disorder, which they supposed they had cured. To correctly diagnosticate disease will tax the best powers of the ablest physician. In doing this, he must derive aid from all departments of medicine. The senses must be educated to the highest degree of perfection. The microscope, the laryngoscope, the ophthalmoscope, and all other instrumental aids to observation, must be called into requisition. Anatomy, physiology, chemistry and pathology must each contribute its share ; and happy is the man, who, with all the aid which science can furnish, is successful in becoming an expert in diagnosis.

But diagnosis, important though it be, is but a preliminary to "the final and supreme stage of medical study," therapeutics. Our profession must vindicate its right to be, by proving its power to cure, relieve or prevent disease. This supposed power constitutes the hold which the physician has upon the community, and imposes upon him the duty to qualify himself for the special work, which he is expected, and which he professes to be able, to perform. He must learn his powers and his limitations ; what he can do and what he cannot do ; what diseases require medication, and what will do better without it. Skill in treatment should keep pace with skill in diagnosis.

Clinical research, then, particularly in relation to the effect of medication upon disease, is the chief NEED, and should be the special work of modern medicine. *The efficacy of supposed remedies can only*

be tested by well-conducted investigations at the bedside. Reasoning *a priori* may suggest modes of treatment; but these are not trustworthy, until they have been subjected to trial by persons competent to analyze symptoms, and to appreciate results.

The fact is not fully realized, that clinical medicine is a distinct department of medical science, and not included in other departments; that it has its own special work, and its own way of doing this work. A man may be an eminent anatomist, or physiologist, or pathologist, or chemist, or pharmacist, and yet not be a practical physician. Dr. Gull well says, "It would not be too much to assert that were it possible to conjoin in one human intelligence all that is now known of other sciences, such knowledge would be compatible with entire ignorance of clinical medicine." A medical school, without ample means for clinical instruction, is an absurdity.

Nélaton, not long ago, astonished the medical world by denouncing the microscope in surgical study, and eulogizing "la clinique." The unqualified declaration of the learned French surgeon, in connection with the uncanonical way in which it was uttered, has been severely criticized; and with justice, if it is to be understood literally. But no one can suppose that Nélaton would seriously condemn the microscope, or its revelations. His meaning evidently is, that the microscope should not usurp the place of clinical study, but that a proper equilibrium should be maintained in the various departments of medical science.

The difficulties which attend the study of the

treatment of disease are obvious. 1. The subject of our investigations is a living human being, placing himself under medical care to receive aid from the experience and acquisitions of the past, and not to be experimented on for the benefit of science or of posterity. 2. The doubt is ever present, whether improvement or recovery in any given case is in consequence of treatment, or in spite of it, or wholly unconnected with it. 3. Observations must be carefully made by competent persons, else they are of little value ; and it is not every medical man, whose mental habits and previous training have qualified him for such work. False facts abound, and they furnish poor material from which to draw general conclusions. 4. Hasty generalizations, even if founded upon trustworthy observations, are worthless, and have been the bane of medicine at all times. They have an air of truth about them which renders them all the more dangerous. They are the offspring of untrained and illogical minds, and cannot stand the test of time and experience.

In view of such difficulties, and the list is not exhausted, the path to success in the scientific treatment of disease seems so beset with obstacles as to disincline us from any harsh criticisms of the past, and to moderate our anticipations of the future.

Let us in this matter do full justice to our predecessors. In all ages of our profession, the study of therapeutics has engaged the attention of wise and sagacious men. Any disparaging allusions to these men would be, to say the least, in very bad taste. If the results of their labors are not all that might

be desired, or might have been expected, still they demand recognition, and should not be undervalued. Were all the knowledge we now possess in regard to the nature and uses of remedial agents obliterated, mankind would suffer a serious, an almost irreparable, loss.

In prosecuting clinical study, we would suggest that the prime duty is not to search through the vegetable and mineral kingdoms in quest of new medicines. Life is short, and chemical combinations are numerous. The Dispensatory contains a large number of supposed remedial agents, many of which might be excluded at once without detriment to any body. The first work may well be one of elimination; and it will be the part of wisdom to gain a more thorough knowledge than we now have of the effects of drugs already in common use, before spending much time in attempts to add to their number.

The method, recently introduced, of ascertaining the physiological effects of drugs by careful observations in relation to their absorption, their passage through the system, the changes they undergo during this passage, their modes of elimination and their therapeutic uses, promises valuable results. When the same exhaustive investigations have been made in regard to all the articles of the materia medica, that have already been made concerning a few of them, therapeutics will assume the form of an exact science. *Such investigations require time; but the time will be well spent.

Over-medication has been the besetting sin of the medical profession; and while clinical researches are

going on to ascertain the influence of drugs, let it ever be borne in mind that nature is a kind mother, and that her healing powers are great; that she may be able to perform greater things than she has as yet been supposed capable of doing; that interference with her operations is a delicate matter, which should not be rashly undertaken. If it be a fact that there are diseases, now supposed to require various and powerful medicines, which will do equally well with less medicine than is commonly used, or with none at all, medical science will be as truly advanced by observations and experiments tending to prove this fact, as by those which establish the efficacy of a new drug, or the beneficial effects of a new mode of treatment.

It is to be regretted that the pressure upon medical men to polypharmacy is so strong, that he is a brave man who can resist it. Many persons seem to believe that for every disease, and for every symptom, there is, either in the earth or on it, a remedy in the form of a drug; and if the patient does not get this remedy, that the fault lies with the doctor. In fact, the only idea some people have of a physician is that he is a man who gives medicine; should he make a medical visit and not give medicine, they would think he had mistaken his calling, and would probably seek other advice.

Clinical study would be facilitated were we thoroughly acquainted with what may be called the physiology of disease. Much has been accomplished in this direction during the last twenty-five years, but more remains to be done. How can we decide

with confidence upon the result of treatment, if we do not know the natural course of disease, uninfluenced by treatment? And without such knowledge are we not in constant danger of running counter to curative processes which nature may have initiated? In surveying the past history of medicine, it is sad to see the fearful ordeal through which the sick man has been forced to pass, the nauseous doses he has been made to swallow, and the disgusting appliances to which he has been subjected; and all, too, in the name of so-called science, and in conformity with theories since exploded. In reviewing the practices and prescriptions of former days, it is easy to perceive that the unfortunate patient, though well cared for in many respects, had to bear more than the pains and discomforts incident to his disease. Is it not possible that in succeeding times a similar criticism may be passed in regard to some of the modes of practice of the present day?

But however important it may be to know the natural history of disease, this is a kind of knowledge very difficult to get; it must be had chiefly by accident or indirection. The results, however, of the treatment by mint water, and other placebos, have not been so disastrous, as absolutely to forbid farther trials in the same direction. Patients treated homœopathically do not always die; and, once in a while, some stubborn individual positively refuses to be doctored *secundum artem*, and yet strangely recovers. We have the right to utilize the knowledge thus surreptitiously obtained, and to make such use of it as its character may suggest; and should the

result be that certain heroic remedies, once deemed indispensable, are turned adrift, and float off into the sea of oblivion, let us endeavor to survive the shock and to preserve our equanimity.

The modern views in regard to the nature of disease must modify modes of treatment. It is not easy to define the word, disease. No two persons, perhaps, would give precisely the same definition. A collection of such definitions, as given by men of note, would constitute a curious page in medical literature. But the notion that disease is a distinct entity, to be cast out of the system, as we would extract a bullet from a wound, or expel a tape-worm from the intestinal canal, can no longer be maintained. "Disease," says Virchow, "is a vital process; not an entity, but a process, running through a series of states or conditions, one state or condition being related to the others as cause to necessary sequence." The same eminent authority, in noticing the wonderful faculty of accommodation possessed by the body, gives us the means of drawing the boundary line between health and disease: "Disease," says he, "begins at the moment when the regulatory function of the body is insufficient to neutralize outward disturbances." Disease, then, being a series of "perverted life-processes":—not a thing added to the animal economy to be driven out, nor a thing subtracted from it, leaving a void to be filled—these processes being as yet, after all our boasts, but imperfectly understood:—is to be managed carefully, with all possible knowledge and study, through its several stages. The sick man is to be *taken care of*

so as best to endure the changes he is undergoing ; and the object in any serious illness being usually not so much to drive disease out of the body as to keep life in it, whatever else be done, or be not done, let his strength be supported by proper nourishment, supplemented, if need be, by tonics and stimulants, so that he may be kept alive till the disease has run its course, and the natural forces have restored healthy, in place of diseased processes. Thus much, at least, reason indicates, and experience sanctions.

Simplicity in prescription is obviously essential to an accurate knowledge and correct appreciation of the properties and effects of medicines. The policy cannot be commended of administering in combination a variety of drugs, with the hope, apparently, that some one of them will hit the enemy, and put him to rout.* If the result be successful, and the patient recover, how can it be known what relieved or cured him ?

Diseases, which can be "cut short" or "broken up" by medicine, are few in number, and may be counted on the fingers. They are the exceptions to the rule. Prof. George Johnson, of King's College Hospital, writes thus :—"Most of the diseases, that are curable by any means, are curable by the unaided powers of nature ; and the chief art of the physician, as of the surgeon, consists in regulating and directing those natural forces, which will cure a fever or an

* "When you know not what to do, be careful lest you do you know not what." This sententious aphorism, attributed to the late President Kirkland, has a practical medical application.

inflamed lung, as they will heal a wound, or mend a broken bone." This comprehensive statement may be regarded as expressing the present state of knowledge in regard to the treatment of disease. If we accept its truth, our course will be shaped in accordance with its suggestions. With less confidence in drugs than had our predecessors, but with more skill in the use of them; with a better knowledge of the nature and course of disease, and with increased facilities for correct diagnosis, we may reasonably hope that, by well-directed effort and careful study, therapeutics may, in time, occupy with honor the position which belongs to them, as "the ultimate end and aim of all medical work, the crowning point of medical knowledge."

But whatever be the degree of perfection to which medical treatment may attain, its limitations are inevitable. Despite human efforts, death cometh to all by a divine decree. By a decree nearly as absolute disease cometh to all, and will continue to come while the earth lasts. The doctrine enunciated in this place, five years ago, that "disease is a part of the plan of creation," though at times assailed, has never been invalidated, and, better than any other statement, comprehends and explains the facts appertaining to human ailments. The primal causes of disease are manifold, hidden, and mysterious. As they existed in the beginning, so do they now exist, and probably will continue to exist. They lurk, unknown and undetected, in the food we eat, in the water we drink, in the air we breathe, in the earth on which we tread, it may be in planetary influences

all about us. The "dust in the sunbeam," shown by Prof. Tyndall to consist of organic matter, and existing in the air of the city, the country, and the isles of the ocean, has been breathed by human lungs ever since man was created, and will continue to be thus breathed, despite all efforts of science, until man ceases to live upon the earth. It will be hardly possible to pass the whole atmosphere over the flame of a spirit lamp, or through a red-hot platinum tube; neither is it probable that all mankind will ever use respirators charged with cotton, however useful such contrivances may be under certain circumstances. While impurities of various kinds exist in the air, which we are constantly breathing; while one of its essential elements, oxygen, seems to be allotropic, and to be convertible into ozone, and possibly other gaseous substances; while these admixtures and changes are universal, and apparently inevitable; while the earth and the waters are full of matters possibly detrimental to health, we need not surely be surprised that diseases come, and we may well despair of being able to annihilate them. We can hardly resist the conclusion that they were included in the original plan of creation, and are designed to fulfil some purpose of the Creator. The proximate aërial, terrestrial, and aqueous causes of disease, we may not be able to demonstrate, but their existence can hardly admit of a doubt.

But while primal causes of disease are probably beyond our reach, secondary causes, many in number and disastrous in their effects, set into operation by human ignorance, carelessness or wickedness, may

be discovered, and their consequences perhaps be averted. The prevention of diseases thus originating offers a broad field for scientific research and promises a rich harvest. The line between primary and secondary causes, like that between sanity and insanity, is shadowy and ill-defined ; but it is not, on that account, the less real. Our expectations even here, however, should be reasonable, and modified by the teachings of history, the facts of experience, and the imperfections and depravity of mankind. If, by any chance, all present existing cases of syphilis were cured or annihilated, would not the disease reappear, and commence anew its ravages ? Undoubtedly, unless the millennium had begun : and what will be the condition of disease, and of doctors, when that blissful period arrives, it is not wise to attempt to prognosticate.

Mr. Emerson, from the stand-point of the philosopher and scholar, gives another view of the origin of disease. " All men carry seeds of all distempers through life latent, and we die without developing them ; such is the affirmative force of the constitution ; but, if you are enfeebled by any cause, some of these sleeping seeds start and open."

The purpose of the foregoing remarks has been to show *that the great need in medicine at the present time is Clinical Research*, more particularly in relation to the treatment of disease ; that therapeutics are behind the other departments of medical science, and deserve increased attention from those who are competent to conduct scientific investigations ; and the suggestion has been ventured, that the results of

such investigations will be to simplify medical treatment, to incline physicians to trust more to nature and less to drugs, and to lead them in their remedial measures to consult the comfort, and to sustain the strength of the sick man, rather than to use violent measures to oust his disease. Believing in the existence of this need, and in the truth of this suggestion, it is gratifying to perceive that the TENDENCY of medical thought and practice is in the direction thus indicated. The contrast between the treatment of the sick, as laid down in the medical books of to-day, and as approved by our leading physicians, with that of half a century ago, is sufficiently marked to attract notice. Active medication is less common than formerly ; the rules of procedure are more simple, exact and philosophical ; the heavy artillery of the Pharmacopœia is not in such constant action ; restorative agents are gaining precedence over those of an opposite character. A few illustrations will not be out of place.

1. Venesection is becoming one of the lost arts. Formerly relied on as an instrument of great good, it is falling into disuse. Once regarded as in many diseases the only means of saving life, it has now so lost its prestige, that many wise physicians seldom or never practise it. Cases were not uncommon thirty or forty years ago, of strong, burly men, going to their doctor in the opening spring, for the sanitary purpose of "losing a little blood"! And did not the doctor accede to their wishes, and deliberately bleed them, until they sometimes sank fainting to the floor! Such sights are hardly seen at the present

day. Cases perhaps exist in which venesection is of service, but they are rare.

2. Emetics are useful in evacuating the stomach of substances which do not belong in it, and sometimes in mechanically relieving the oppressed lungs. But as a means of breaking up fevers, and of stirring up the system generally, so as, in some unknown manner, to exert a salubrious influence, they are nearly obsolete. In the Cyclopædia of Practical Medicine, a standard work not many years ago, repeated emetics are recommended as a means of expelling tuberculous matter from the lungs, and thus preventing its localization in these organs! No mention is made of this remedy in the recent work of Niemeyer on Practical Medicine.

Tartarized Antimony, not in emetic but in nauseating doses, was formerly a favorite remedy in Pneumonia, and other diseases. It is not much used now; and the startling heresy has been broached, that this drug should, in the treatment of the sick, be dispensed with, rather than dispensed.

3. Blistering in acute inflammations, a practice once almost universal, is now regarded with suspicion. Vesication is usually a torture to patients; and when we add to this, that in the opinion of many intelligent observers, it does not diminish the duration of acute disease, that it increases febrile excitement, and that by developing a fresh inflammation near an inflamed part, the original trouble is more likely to be aggravated than to be lessened, the propriety of continuing to employ it in such cases becomes, at least, questionable.

4. What shall be said of Mercury? In its varied forms, especially in its classic form of Calomel, it has long ruled right royally. Supposed to possess remarkable powers in controlling fever and inflammation; to act as an efficient alterative in various maladies; to be a specific in iritis and syphilis, and indispensable in the proper treatment of these diseases; to have a marked and beneficial influence over the secretions generally, and over that of the liver in particular; it was administered largely and unhesitatingly, with full faith in its many and protean virtues, and with undoubting confidence in its beneficial action. But the faith of our fathers in this drug has been rudely shaken in these latter days. Its effects are frequently bad, and sometimes disastrous; its benefits are often questionable. Fevers and inflammations get well without it. Iritis, as our associate Dr. Henry W. Williams has clearly shown, can be cured better without it than with it. Its anti-syphilitic powers have been disputed; and some of the bad results, occurring during the course of syphilis, have been ascribed to its use.

The belief, however, that mercury has a specific action on the liver, has survived until the present time, and is very general. Whether there be an excess or a deficiency in the hepatic secretion, this drug in some mysterious way is supposed to have the power of setting every thing right. But the iconoclasts of the age will not suffer even this cherished opinion to be held in peace. A committee appointed by the British Medical Association have published an elaborate report on the cholagogue action of mer-

cury. By conclusive experiments they found that whether given in large, small, or gradually increased doses, mercury did not increase, or influence in any way, the biliary secretion, until the subjects began to suffer in health, and then the secretion was diminished.

Calomel will retain its place as a valuable purgative, particularly in diseases of children attended with vomiting. It is eliminated through mucous membranes, and may therefore sometimes have a beneficial effect upon them. The weight of evidence seems to be in favor of mercury, as a remedy in certain forms and stages of syphilis; but it can no longer exercise the despotic sway which it once did; its sceptre has departed, and it must henceforth hold a subordinate position.

It will be remembered that, during the war, a circular was issued by the Surgeon-General, directing that calomel and tartar emetic be struck from the supply-table of the army. Some of our brethren were indignant, regarding this action as an insult to the medical profession. Perhaps it was; nevertheless, many persons experienced a sensation of relief when the circular was issued, and felt that it would increase the chances of life to the soldier, and of death to the rebellion.

While certain medicines and modes of procedure have thus been passing away, others of real and acknowledged value have been introduced into medical practice. A few may be named.

1. *Anæsthesia*. The first operation at the Massachusetts General Hospital on a patient insensible

through the inhalation of sulphuric ether, must be fresh in the memory of many who are present. It marked an era in the history of our profession, as important as that of the discovery of the circulation of the blood, or of vaccination. The man, to whom we are mainly indebted for the introduction into medicine and surgery of sulphuric ether as an anæsthetic, has gone to his rest. No civic honors were conferred upon him: no appropriation from the national treasury cheered his last days. His name does not appear on the monument erected in Boston, "to commemorate the discovery that the inhalation of ether causes insensibility to pain." He did not discover the possibility of producing anæsthesia; this was known before his day; but he did discover and prove that the production of entire anæsthesia by sulphuric ether is a practicable and *safe* procedure. This fact was not known until he revealed it, and without this latter discovery the former was practically worthless. Time corrects errors and reverses false judgments; and posterity will do justice to the memory of the man, by whose boldness, sagacity, and perseverance this priceless boon was conferred upon the children of men.

The value of ether as an anæsthetic cannot be overstated: the same cannot be said of chloroform. The continued use of this agent by inhalation can hardly be justified. It has killed its hundreds, and every month is adding to the number of the slain. That wise and good men persist in using it in preference to ether, the danger from which is almost infinitesimal, is to many persons a great mystery.

It is said that chloroform is more speedy and pleasant in its action than ether. Undoubtedly; but "cito et jucunde" are not worth much if the "tuto" be wanting.

Are we told that chloroform kills comparatively but a few people? But what right has the medical profession to kill even "a few people"?

"Its banner bears the single line,
'Our duty is to save.'"

2. *Cod Liver Oil* is virtually a new remedy, although occasionally used in former times. It has hardly fulfilled the expectations of its early and zealous friends, but there can be no question as to its superiority in pulmonary consumption, and in some other diseases, to the drugs which it has superseded.

3. *Bromide of Potassium*, like other new remedies, is in danger of being overrated: still, it is a valuable medicine. It will sometimes induce sleep, when other hypnotics fail. It stands preëminent among the drugs supposed to be useful in the treatment of epilepsy. If not directly curative in any disease, it holds the system quiet, so that nature's reparative processes may go on without interference.

This is one of the drugs, the course of which through the system has been clearly ascertained by the method to which allusion has already been made. "It is absorbed readily by all mucous surfaces, but most readily by the stomach; and it is passed by that organ into the blood in the course of fifteen minutes. It goes into the blood as the bromide of

potassium, and is not changed there. It is eliminated chiefly by the kidneys, moderately by mucous surfaces, slightly by the skin. Elimination is complete in less than twenty-four hours after the ingestion of the last dose. While in the system, it diminishes the reflex sensibility of the cerebro-spinal system by a sedation of the circulation of the nervous centres. This is accomplished through its action on the vaso-motor system. This action explains its power of producing sleep."

4. *Chloral* is knocking loudly at the door and demanding admission. It comes highly recommended, but time is required to test its claims before it can be admitted into full communion.

5. *The spray-producing Atomizer*, recently introduced into practice, is an admirable invention, and for the purpose of applying medicated solutions to the mucous membrane of the throat and air-passages, vastly superior to swabs and probangs. In scarlet fever, diphtheria, membranous croup, and other diseases involving the throat and lungs, this instrument, especially that form of it which is operated by steam, is almost invaluable, and may in a doubtful case turn the scale between life and death.

6. *Hypodermic Medication* is coming into general use for various purposes. As a means of relieving pain, the effect of the subcutaneous injection of morphia is instant, and sometimes almost magical, succeeding when the same substance taken into the stomach fails. This mode of practice has its dangers, but, judiciously employed, is legitimate and efficacious.

A comparison of these two lists of remedies shows a change in medical practice during the last quarter of a century, and indicates clearly enough its direction.

The tendency of modern practice is also seen in the increased attention now given to the subject of dietetics.

One of the most important remedies in sickness is food. Life cannot continue without it. Proper nourishment is as essential in disease as in health. The system must be supported while healthy processes are supplanting unhealthy ones.

The sick are better fed now than formerly. Here-in treatment has improved. "A wide field of labor," says Graily Hewitt, "presents itself in the regulation and adaptation of food, with the object of effecting radical and curative changes in the diseased tissues of the body." Much has been accomplished of late years in this direction; more remains to be done. If any physician fear that, by the minimizing of drug-treatment, his occupation will be gone, let him diligently contemplate this field of labor; he will find it broad enough to afford full scope for his best energies.

Be it ever remembered, that if an article of food be palatable, this fact alone is not sufficient reason for withholding it from the sick. It sometimes seems as if the same system were adopted in the sick-room, as is said to prevail in certain boarding-houses: "Find out what your boarders do *not* like, and give them all they want of it."

Under the head of food, may be included drink. In olden times, sick people were not allowed to drink cold water when they were thirsty, for fear it would hurt them. This antediluvian notion is not yet dead. It occasionally crops out, even within the profession. It is time that its final obsequies were solemnized.

As communities have progressed in civilization, there has been a gradual increase in the length of human life. The truth of this statement has been clearly shown in a series of carefully prepared papers by our associate, Dr. Edward Jarvis, in the *Atlantic Monthly Magazine*. From statistics collected by him, we learn that the average rate of mortality in England and Wales was, in the first forty years of the eighteenth century, 340 in 10,000 living: from 1821 to 1860, it was 207 in the same population. In Boston, from 1728 to 1752, the deaths were 1 in 21.65 of the living; from 1846 to 1865, they were only 1 in 42.08:—about half as numerous as a hundred years before. Dr. George Derby, Secretary of the Massachusetts State Board of Health, reports the average death-rate of Boston from 1850 to 1870 to be 1 in 39.29.

From a comparison of ancient and modern longevity, it appears, that, in the middle of the nineteenth century, the life of all classes in England and the United States was fifty per cent. longer than that of the best among the Romans at the beginning of the third century.

Many causes have conspired to produce this

result: among them may certainly be included an improved medical treatment of disease. That the progress of medical science has been one of the factors in lengthening the days of men and women upon the earth is rendered probable by hospital records. In the Massachusetts General Hospital, the proportion of deaths to admissions, from 1860 to 1870, was eight per cent. ; for the preceding forty years it was ten and two-tenths per cent. The percentage of the number "discharged well," on the "total admitted," from 1860 to 1870, was 56.6; for the preceding forty years it was 46.5. The statistics of the New York Hospital in New York City, and of the Pennsylvania Hospital in Philadelphia, are of a similar character.

The annual report of the State Board of Health for 1869 contains a table, giving the mortality from consumption in Massachusetts during each of the sixteen years from 1853 to 1868, inclusive. From this table it appears that consumption in this State is diminishing in fatality. Comparing the first group of five years with the last group of five years, the annual gain in each 100,000 of the population is fifty-four lives; giving, as the actual saving of life in the last five years, 3,440 persons, or 688 in each year; and the improvement seems to be going on.

In the practice of Midwifery, there has been signal improvement during the last two hundred years. It has been shown from the mortality bills of London that for twenty years, ending in 1680, one in every forty-four delivered, died; while for twenty years ending in 1820, only one in every hundred and

seven died. So that the number of parturient mothers lost during the last years of the seventeenth century was about double the number lost during the first years of the nineteenth century. In St. Bartholomew's Hospital, London, from Jan. 1, 1862, to Dec. 31, 1868, there were 5,734 deliveries, with but 21 deaths, being one death in every 273 delivered. It is fair to infer that the medical statistics of London, in this matter, will not differ materially from those of other cities and towns in Europe and America.

In view of statistical records, tending to show the favorable results, in recent times, of medical counsel and practice ; in view of the great advance that has been made during the last half century in medical science ; in view of the fact, that never before has so devoted a band of earnest and competent men been engaged in investigations appertaining to every department of medicine, as at the present day, with means and instrumentalities to aid them in their work such as their predecessors never dreamed of ; in view of a bright future thus dawning on our profession, let us reverently "thank God and take courage."

Mr. PRESIDENT AND GENTLEMEN :

Since the last annual meeting twenty-six of our number have died. I can speak of but a few of them from personal acquaintance, and I much regret that from want of such acquaintance others equally deserving must remain without special notice. But