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ORGANOPATHY;

OR,

MEDICAL PROGRESS.

AN ESSAY,

BY

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PREFACE.

THE mariner's compass is a fact in science and a guide in art. It is acknowledged that medicine owns nothing comparable with this. No single fact is known in the science which is a general guide in the art.

It must also be acknowledged that the discovery of a fact in medical science which may be such a guide in medical practice would be the greatest of all discoveries in the science, and the best of all gifts to the art.

The writer of the following pages believes that such a fact has been discovered, and that such a gift has been bestowed.

He may be mistaken, he lays no claim to infallibility, he desires to express his belief with modesty; but it is his belief, and he would fail in his duty if he did not, with all sincerity and earnestness, make the avowal.

He addresses the Medical Faculty throughout the world, and he calls upon every member of this Faculty to give the subject a patient and practical investigation.

To refuse to examine, in the only satisfactory way, pretensions so put forth, implies an amount of prejudice and pre-judgment which is a great reproach to a learned profession; so great, indeed, that it cannot continue. The writer verily believes that the time is not far distant when every medical man will resolve that such a reproach shall not any longer be justly brought against him.

HORTON HOUSE, RUGBY. Dec. 3rd, 1867.

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"Every man, from the highest to the lowest station, ought to warm his heart and animate his endeavours with the hope of being useful to the world, by advancing the art which it is his lot to exercise; and for that end he must necessarily consider the whole extent of its application, and the whole weight of its importance."—JOHNSON.

PLINY, in his day, complains that those who have attempted to draw pictures of plants have shown nothing clearly but the difficulty of their undertaking. Physicians, in all ages, have busied themselves in writing books on medicine; but the only point they have concurred in proving is the perplexity of their task.

In our day artists have succeeded in producing pictures of plants which well represent the elegancy of their forms, and the beauty of their colours. In the interests of humanity it is to be hoped that medical writers may be permitted to approach a similar perfection, and be able to describe disease as it is, and its treatment as it ought to be.

There is, indeed, an impression prevalent even among educated people, that medicine has long been settled, if not in its principles, at least in its practice; and this makes them prefer what they call "the regular steady practice according to rule," or even what they allow to be the mere repetition of routine, to the views and treatment of any new school, simply because they are new and comparatively untried.

Let us therefore look at the progress of medicine in past times, and at its present condition.

If in doing this what seem to be errors are pointed out, let me disclaim improper motives and uncharitable feelings, and offer a protest against being supposed desirous to hold up any one to ridicule or contempt, when sayings are quoted, or doings are referred to, in themselves ludicrous or foolish. I would gladly make no reference to the common modes of practice, past or present, if, without this, it were possible to do justice to my subject. But when the matter under discussion is the comparative merit of rival claimants, it is an unavoidable, though it may be a painful duty, to represent fairly not one side only, but both.

I ask my readers, then, first to look at the difficulties and perplexities of medical affairs up to our time, as PLINY looked at the botanical pictures of his time; and having seen these, we can turn with pleasure to that side of the subject which begins to resemble plants painted by a modern artist.

Authority-routine. We are told that the beginning of medicine among the ancients was the exposing of the sick in public, so that any passer by, who had been similarly attacked and cured, might give his advice. Later than this, all who were cured were required to go to the temples, and there record the symptoms of their disease, and the remedies which were thought to have cured them. For a time every one had the privilege of going to consult these registers, and of choosing for his sickness, or for that of his neighbour, the medicines of which experience had seemed to show the value. Afterwards these facts were collected. Then, the priests attached to the temples seized the practice of the art, and formed a medical code which was called the sacred book. From the directions of this book the priests who followed were not permitted to vary; if, in obeying the rules there laid down, they could not save their patients, they were not held responsible; but if, after departing from them, the result did not justify their course, they were punished with death.

Thus, on the plea of authority all further progress in

the healing art was arrested, and the tyranny of *routine* established; and it is worthy of note that with this wretched state of things the ancient public seem to have been satisfied.

At a later period, in the best times of Greece, medicine was delivered from priest-craft by HIPPOCRATES and others, and became a profession of its own.

During the general decay of learning and liberty in the middle ages, it fell again into the hands of the priests; and this led to the separation, (a misfortune I think), of surgery from medicine. At the period of the Reformation the treatment of the sick was again surrendered by the priests to a medical faculty; but the separation of surgery from medicine continued, and in this country was perpetuated by the charter of king HENRY VIII.

For about three centuries medicine has belonged to men exclusively devoted to its study and practice. It has made progress during this period, and notably in some of its branches, as anatomy, physiology, animal chemistry, and pathology. But in respect to therapeutics, or the actual treatment of the sick, this progress has been checked by two characteristics apparently opposite to and inconsistent with each other-violent changes on the one hand, and unthinking routine on the other. Men of energy and industry have successively pushed themselves forward as leaders; so that doctrines the most contradictory, and practice the most opposite, have been in vogue, not only in succeeding ages, and in different countries, but in the same age, and in the same country. And yet, no sooner has a teacher established a reputation, and formed a school, than routine reigns among his followers. The excuse offered for this being the authority of the master.

 some reason why you think so, and the second reply was, "I don't know at all !"

Among the ancient priests there was but one routine; among the modern medical practitioners there are many; but the opposition and contradiction of the teachers has, until lately, remained within the pale of the faculty. And the public in Europe have had very much the same feeling, on medical matters, that the public in Chaldea or Egypt had in old time; they have liked what they thought was the regular steady practice according to rule, or they have made up their minds to be content with routine.

That I am not mistaken in representing the educated people in England as in the condition of the same classes three or four thousand years ago, will appear from the following letter which I had lately the pleasure to receive :—

"The art of healing is in reality so complex and varied that a very large part of it appears to me to rest on an unexamined routine. Certain medicines are usually given in certain cases because they have always been given. Even if a medical attendant has no reason whatever to give for using them, he continues to use them, because he knows no better. He feels that in the beaten track the responsibility is not his, but the profession's. But if he stir out of the beaten track the whole responsibility becomes his. And this he dares not face.

"All honour is therefore due to those who set themselves to force this routine to give an account of itself. In most cases it can give no account. But even when it can give no account it always dies hard.

"The ordinary allopathic treatment often reminds me of those savages who, at the time of an eclipse beat kettles to drive away the monster that is devouring the sun. The medical men find that with their treatment the patient often recovers: the savages find that the sun always reappears. The logic of both is often nearly on a par."

This view of professional routine, taken by intelligent laymen, is bad, but it is not so bad as the reality. It would be much worse if they saw that medicines are given, not because they have always been given, but because they have lately been recommended by *some authority*; while other medicines of an opposite tendency, are given in similar cases by others, because they have been praised by *another authority*; and this not for one disease or two, but for all. Bleedings and purgatives are had recourse to by this practitioner; stimulants and tonics are given by that, for the same maladies.

The treatment which the investigators of homœopathy have met with from the profession is, to some extent, undeceiving the public on this topic, and laymen are beginning to understand that, up to this hour, there is nothing settled in the art of healing; that, on the contrary, the most discordant doctrines, and the most antagonistic methods of treatment are advocated by contemporary teachers, are adopted by their pupils, and become parallel lines of routine.

The professional body may therefore be divided into the teachers and the taught, or into those who occupy posts of authority, and those who follow routine.

We need not concern ourselves further at present with the latter; but if we carefully examine the former we shall find that they are composed of the following sections.

Reason—dogmatism. If we look back upon the noble minds of antiquity, we find HIPPOCRATES, indeed, endeavouring to limit himself to the observation of the phenomena of diseases, and the effects of remedies. But, immediately after him, we see the staff of teachers, headed by THESSALUS and POLYBIUS, and, at a later period, by GALEN, trying to use their reason in assigning the causes of morbid phenomena, and so becoming bewildered in a pathology and therapeutics in which both diseases and remedies are hot, or cold, or wet, or dry; and we find them, especially GALEN, misled by a maxim derived from these imaginary qualities, and teaching that diseases are cured by their contraries. This was the dogmatic school of the ancients, and it reigned without a successful rival for many centuries.

If we look at the men who have been teachers since the revival of learning in Europe, we see with surprise how the medical chemistry of SILVIUS, and the medical mechanics of BORELLI have had their triumphs and defeats; how STAHL established, as he thought, his vital dynamics or autocrateia; HOFFMANN his medicina rationalis systematica; BOERHAAVE, among other doctrines, that de glutenoso spontaneo; CULLEN his spasm of the extreme vessels; BROWN his two classes of disease, the sthenic and the asthenic; and how these and other systems have been, as ETMULLER expresses it, successively "hissed out of doors."

And we look with wonder at the fact that the same tendency to speculate still misleads the best minds of our own time. A single instance will illustrate my meaning. I have just mentioned a familiar doctrine of fever, CUL-LEN'S spasm of the extreme vessels; a doctrine at one time widely received, but in itself nothing more than a conjecture resting upon no solid foundation, and now everywhere rejected. Yet, in a review lately published, written apparently by a physician of authority and eminence, we find a similar doctrine of spasm, which is advanced by the writer of the book reviewed, and applied by him to the explanation of cholera, spoken of thus, "surely this seems a reasonable theory !"

The author of the book "supposes that a spasm, or cramped state of the muscular fibres which embrace the minute pulmonary arteries, [CULLEN'S extreme vessels], is caused by the choleraic poison, and bars these slender channels against the advancing blood." "Surely this seems," says the reviewer, "a reasonable theory, ... and we may understand how bleeding may help by relaxing the spasm." And so we still have suppositions, as explanations and guides in practice, laid before us by acknowledged teachers, instead of observation, analysis, and induction. An old friend of mine wrote in the margin of his "CULLEN," more than fifty years ago, opposite the words "relax the spasm,"—" It is sad indeed that a head so clear as the author's should thus be haunted by spasm !"

Truly HIPPOCRATES said well "the art is difficult!" These are the mistakes of faithful men, of men who have the strongest claims upon our respect and admiration. They are men who have mourned over the imperfections of their calling, and who have spent a long life in earnest efforts to remove them; men of genius, learning, and industry; men who, when other people went to bed, lighted a fresh candle. Moreover, they are men who have ever made a ready response to the calls of duty, whether those calls have come from patients needing succour, or from medical men seeking information.

Experience—empiricism. As there was among the ancients, so there is among moderns another class of worthy men in the faculty, men of strong minds, good sense, and simplicity of purpose, who distrust authority, and who are convinced of the failure of reason when employed in speculation. These men take up another position, and, rejecting hypotheses of all kinds, rely upon experience. Dr. STOKES recently gave expression to this view in the Medical Council of the Empire, on seconding Professor ACLAND's motion.*

"There can," he said, "be no doubt that medicine requires to be placed on a much more scientific basis than it at present possesses. It is now simply *empiricism*; and that empiricism is only tolerable and useful because it is wielded by thoughtful men."

In the opinion of this section of physicians no true theory of diseases and their treatment is yet known. They look upon the explanatory contrivances of the dogmatists as belonging to the evils which flew out of Pandora's box.

* This motion is noticed in a Paper on "The Physiological action of Medicines," read at Nottingham, Sept., 1866. They limit themselves therefore to the observation of what the senses can teach, and in prescribing rely upon what chance, or what experiments made on the sick, has taught them.

I remember a distinguished physician, to whom I was then a pupil, prescribing *carbonate of iron* in large doses for every patient, (and they were many), that he saw for some days; and this notwithstanding the wide disparity in the nature of their cases. He wished to learn what iron could do, and he made the sick his subjects. This is empirical experiment.

A few months ago a gentleman from an adjoining county consulted me for the usual symptoms of indigestion brought on by hard study. For *eleven months* he had been under the care of the leading physician of his town and neighbourhood, and during those eleven months he had received from this gentleman separate prescriptions of the following drugs; the "adjuvantia, corrigentia, et cætera" with which they were combined, being omitted.

1. Triticum repens.

- 2. Phosphoric Acid.
- 3. Rhubarb.
- 4. Iron and Quinine.
- 5. Capsicum.
- 6. Prussic Acid.
- 7. Gentian.
- 8. Nitric Acid.
- 9. Quassia.
- 10. Bicarbonate of Potash.

This is empirical practice.*

- 11. Chloric Ether.
- 12. Liquor Potassæ.
- 13. Taraxacum.
- 14. Bismuth.
- 15. Salicine.
- 16. Cascarilla.
- 17. Spirit of Nutmeg.
- 18. Henbane.
- 19. Carbonate of Magnesia.
- 20. Aloes.

* Perhaps it will be expected that I should say what became of this patient. In six weeks he was well, with the exception of some swelled glands which, of course, could not subside in that time. This result will be accounted for in various ways, according to the bias of men's minds; some will say he got well from leaving off medicines, no slight reproof to the physician who prescribed them;—others will believe that the *nux vomica* and *sulphur* I gave him wrought the cure; for myself I think both these causes contributed to his recovery.

" Empiricism is only tolerable because it is wielded by thoughtful men." There are thoughtful men among us, perhaps as many as in any other profession, and they deserve to be honoured. But such an example as the one I have just given, and which is a representative one, shows that empiricism, even in the hands of thoughtful men, is a poor and feeble thing. What must it be in the hands of those who do not think, but follow empirical routine? In England alone twenty thousand men are going their daily rounds visiting the sick, many with benevolent hearts, many with liberal hands, more benevolent and more liberal than they commonly receive credit for; but, alas, how many with empty heads! heads, that is to say, having nothing in them but a catalogue, more or less lengthy, of the names of diseases linked to another catalogue of poisonous drugs. "Plus, un petit clystère insinuatif, preparatif et remollient, pour ramollir, humecter et refraichir les entrailles de monsieur. Plus, dudit jour, un bon clystère detersif, composé avec catholicon double, rhubarbe, miel rosat, et autres, suivant l'ordonnance, pour balayer, laver, et nettoyer le basventre de monsieur. Plus, une bonne médicine purgative et corroborative, composée de casse récente avec séné levantin, et autres, pour expulser et evacuer la bile de monsieur. Plus, un clystère carminatif, pour chasser les vents de monsieur. Plus, dudit jour, une potion anodine et astringente, pour faire reposer monsieur,"-pour faire reposer monsieur! It will be granted that this satire is not even an exaggeration of the truth.

Nature—scepticism. It is not surprising that the failure of dogmatic and speculative medicine to establish a true theory, and the poverty of empiricism, and the meagre success in actual practice of both, should have deprived some men of their faith in both the science and the art of healing. These are the medical sceptics of all ages.

The prevalence of scepticism among the learned men of

the profession is no small difficulty and discouragement to those who are anxious to fulfil the duties of their calling, and to heal the sick in the best possible manner. The greatest modern historian of medicine, KURT SPRENGEL, who with untiring industry has studied it from its origin down to the nineteenth century, and has filled nine volumes with the results of his researches, has arrived at this conclusion,—" scepticism in medicine is the top stone of the science, and it is the wisest part to regard all opinions with indifference, and to adopt none!" This talented and laborious German is thus driven by what he has seen of the confusion and opposition which every where prevails, to blank despair!

Nor are the vigorous intellects of France less unhappily circumstanced. Their able medical historian, P. V. RE-NOUARD, has travelled over the same ground, and has reached a goal scarcely less discouraging than SPRENGEL'S. He asserts this, as the only reliable guide,—" those remedies which have cured one case of disease will cure all cases analogous to it." This is the old Babylonian and Egyptian routine; it leaves us the few remedies which chance has discovered, but supplies no means of increasing them. If we are thus driven back to the ancient temples, and to their sacred book, it will not be long before we are ready, in the blindness of ignorance, and the intolerance of prejudice, to put to death any who dare to depart from the beaten track.

Nor are our best known English teachers more encouraging. SIR JOHN FORBES, "having been actively engaged in the practice of medicine for the long period of fifty years," leaves a book as a legacy, and the burden of it is this:—

"Alas! it is hardly a legitimate ground for exultation that we can control and extinguish a few of the more trifling diseases, while nearly all the huge remaining mass of human maladies must be left to the chances and uncertainties of a treatment which is *neither precise in its indications, direct in its action, nor positive in its results.*" This despairing scepticism of the learned has had its influence on the profession, and has led to the formation of a school called the "expectant." This school is much older on the continent than in England; its characteristic is reliance upon nature, or upon what is called the "vis medicatrix naturæ." When a brother of mine was taken ill in Rome, now fifty years ago, a well known physician was sent for, and when he arrived, he carefully examined his patient, and gravely said to him, "Ah! drink barley water, and I will come again to-morrow and see what it turns to!" The French I think were the first to give this method a name, they called it "La medicine expectante."

It is from this school we are learning with some precision what nature, as it is called, can do unaided by art, except as nursing and regimen can lend a helping hand. It has been ascertained that, in acute disease, the proportion of recoveries is greater than when active treatment is used. Still even under this curative power of nature, the per centage of deaths is considerable, and there is an uneasy feeling in the minds of these practitioners, or rather lookers-on, and they are coming to the conviction that "laisser faire" is a better maxim for the guidance of commerce, than for the treating of disease, and that doing nothing cannot be the *ne plus ultra* of medicine.

This scepticism has also partially infected the lay public. Some educated people are now indifferent as to receiving any prescription of medicines when they consult their physician; they prefer direction as to travel, diet, excercise, and clothing; they think that medicines are generally useless. In the letter I have already quoted this loss of confidence is thus expressed :—

"I think no one has yet exhausted, or even approached to exhausting the investigation of the curative power of nature. I am quite sure that in far the majority of cases the work has been done, not by the drugs which the physician has prescribed, but by the condition of air, temperature, diet, exercise, that he

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has ordered. I do not at all deny that in one case out of a hundred the drug has done the work, and that without the drug nature would not have done it. But I doubt if the proportion is more than that."

This is the swing of the pendulum in the opposite direction. Too much has been expected from drugs; they have been used too much; the expectation has been disappointed; that which has often been the fate of single medicines is now the fate of them all, the belief in them is gone.

This mistake is as great as the old one, and will lead to evils as great. I will content myself by putting one before the minds of my worthy but sceptical friends.

They will fall into the hands of the surgeon. It is obvious that, from circumstances, it is not always possible to travel; and also, alas! severe illness *will come*, when exercise cannot be thought of, and when diet can do little to ward off painful or protracted suffering, or to diminish the danger of a fatal termination.

"Let the head be shaved entirely, and have the patient brought near to the right side of the bed; raise the head by a hard pillow, and put a towel round his neck to receive the blood ; let an assistant keep his head steady; at the same time draw the scalp downwards in all directions, so as to strain the calvarium as much as possible; the scalp will divide with so much more ease. In this your own left hand will materially assist, by placing it at the upper and back part of the head; commence the incision between your thumb and forefinger, as far back as the lambdoidal suture; press the scalpel sufficiently down so as to divide the scalp entirely through at once; carry on the incision directly along the sagittal suture as far as the hair grows on the scalp, and which will cover the cicatrix after the issue is healed up. The length of the incision thus made will be, in the adult, about seven or eight inches; take care that the scalp be divided entirely and perfectly through, so that the edges of the incision will separate so far as to enable you to introduce a

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dossil of lint, rolled up hard, as thick as two fingers, and which should be well soaked in spirit of turpentine."

The cases in which this painful and hazardous undertaking is recommended, be it observed, are not surgical but medical; they differ widely in character; they are inflammation of the brain, epilepsy, paralysis, delirium tremens, and fever. The operation has been performed many times, upon patients from three years old and upwards, by the surgeon who proposed it. The resistance made by friends of the patient is to be "overcome by remarking quietly that 'it is only intended to make an issue,' an insignificant triffe."

It is not many years since this operation was introduced; and now, to the scalpel there is added the actual cautery. The red-hot irons of the old surgeons, which it was believed had been discarded for ever, are now again taken in hand, with this difference only, they are made white hot.

To be cut and burnt after this fashion may be "insignificant trifles" in the estimation of enterprising surgeons; but patients and their friends will come to think them as bad as the former evil, when too much medicine was given by speculative physicians.

Physical Science—philosophy. Let me next notice a section of the medical teachers which is of modern origin, but which is now affecting to take the lead in medical affairs. These are the medical philosophers or men of science. They are talented, industrious, and aspiring. Professor ACLAND speaks of this school in these terms, "there never was an age when there were so many students, in the best sense, of biology and of medicine, actuated by a simple love of truth; and never a time when, as a class, they were so free from prejudice, so candid, and so patient."

I am willing to hope that this may become a true re-

presentation of the spirit of the age. I have been putting its truth to a practical test for some years, and am doing so still. I cannot say that the experience I have hitherto had is re-assuring, but I shall rejoice if the Essay I am now offering to the notice of my profession is received in this candid and patient manner. Less cannot be expected from Dr. ACLAND himself than that he will set the example.

That the application of the collateral sciences to the improvement of medicine is a move in the right direction cannot be doubted. Animal chemistry is a noble pursuit; and advantages are also to be derived from the observation of the specific gravity of fluids; from the application of acoustics in the stethoscope; of optics in the ophthalmoscope and laryngoscope; and of thermotics in the thermometer.

Far be it from me to undervalue any of these sciences; they are lines of investigation worthy of being followed; but they can be of use to medicine only within their own proper limits. They may help in diagnosis, and they may now and then suggest a new remedy; but they can never teach a law of therapeutics. It is not in them to do this. On the contrary, they become hindrances and *ignes fatui* when they are lifted up out of their proper and subordinate sphere. The modern medical chemists especially err in this matter; they are like their predecessors the alchemists in the 16th century, who sought to transmute the baser metals into gold. The aim of both is an unattainable object; as that of children who plant stones, and expect trees to grow out of them.

That these sciences have failed as trustworthy guides in the treatment of disease is manifest both from the books which have been written under their dictation, and from the practice of the able men who have devoted themselves with assiduity to their cultivation.

As a specimen of the books I will mention one by Dr. OWEN REES on the Diseases of the Kidney, connected

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with Albuminous Urine, (Morbus Brightii). In this book, as in others by the same class of authors, the anatomy, the pathology, the chemical analysis, the symptoms, and the complications are carefully detailed, but the therapeutics are a failure. The remedies suggested are avowedly not specific, nor are they scientific; the old "indications" and "intentions" are perpetuated. For acute cases, bleeding; jalap and cream of tartar to purge; antimony to excite perspiration ; mercury, but that it does so much harm; digitalis and opium. For chronic cases, iron and elaterium; the former to increase the red globules of the blood, the latter to purge away the dropsy. These remedies are fenced about with so many cautions and warnings that it is difficult to see how a "thoughtful man" can use them. "We are obliged," says Dr. REES, "to have recourse to very active measures, which, though we are driven to them by necessity, must yet be used with the greatest care, for the reason that the secondary conditions known to occur during the progress of the disease are such as will be greatly aggravated by the constitutional effects of active and depletory treatment." We are to fear "producing serious mischief by inducing that watery condition of the blood which speedily assists the disease to a fatal termination." It may become "absolutely necessary to have recourse to the lancet," but "the difficulty of discriminating" when this may be done without placing "the patient in a most unfavourable position for recovery," and when bleeding will not "especially tend to accelerate death," is strongly insisted on.

Of antimony it is said, "We shall do well, if possible, to urge antimony as a remedy. This cannot always be done owing to the nausea induced."*

* It would be a good service if any one would re-prove antimony, specially with regard to its action on the kidneys. It is probable, (from the old provings), that albuminuria would be one of its effects, and this would shew it to be a specific for Bright's disease; and when given in small doses, there would not be the difficulty Dr. Rees experiences arising from nausea. Of digitalis: "When discreetly exhibited there seems much apparent benefit from its use." "The dose should be small, however, and its effects on the pulse narrowly watched," "we so often have a morbid condition of the *heart* present."

Of opium: "We may occasionally use opium with great advantage;" "the dose should at first be small, and its effects must always be closely watched. This is necessary owing to the liability to *head* symptoms, (apoplexy), which characterises this disease, an evil occasionally arising in a most unexpected manner."

Of mercury: "We shall do well to avoid mercurials entirely." "Even a single purgative containing calomel has been known to induce dangerous salivation."

There is to be no *direct* action upon the diseased organ; "the state of the kidney must never be lost sight of, and every thing tending to determine to that organ, either in the form of medicines or articles of diet, should be studiously avoided."

The only remedy suggested by science is iron, which is "exhibited with a view of supplying red corpuscles to the blood." But in albuminuria—the disease under consideration—the loss is not of *red* but of *white* particles; it is albumen which needs to be replaced.

All who are well acquainted with modern medical literature, will acknowledge that this is a fair instance of the failure of science in books. The following cases may be taken as fair examples of its failure in practice.

In May, 1858, I was consulted by an elderly lady who was seriously ill. I gave the opinion that she had an abscess in the right kidney; that I could not hold out much hope of her recovery, though I should be happy to use such means as were in my power. In consequence of this opinion her friends took her to London. She was seen by one of the philosopher physicians, who was requested to write his diagnosis. He wrote "abscess of the kidney," and prescribed *effervescing salines* to be taken when feverish, quinine for debility, to be taken when not feverish, and jalapine to be taken when the quinine confined the bowels. It will be observed that none of these prescriptions are the suggestion of science. He owned he had no remedy, and he anticipated a fatal result. The patient was brought back to me. At this time the abscess was discharging, by the bladder, immense quantities of pus. I gave her *lycopodium*. The discharge of pus was considerable for some weeks, but gradually diminished; and in the beginning of September it had disappeared, the patient was well, and remained so. She spent the summer of 1859 in a succession of visits to friends in Ireland, and throughout the year 1860 continued well.

In November, 1865, a young lady was taken to London to another philosopher physician, her friends being greatly alarmed at her condition. Their fears were confirmed by this consultation. The physician wrote as follows to the surgeon in the country :-- " The urine is highly coagulable, and every symptom characteristic of Bright's disease is present in her case." Among these symptoms was extensive dropsy of the body and lower limbs. Acetate of ammonia with wine of iron and saffron, and cream of tartar with jalap and capsicum were prescribed on the 13th November, 1865. In January, 1866, she was brought to me in the state above described, but getting worse. The quantity of albumen was great, and the dropsical swelling of the body and limbs formidable; it was painful to look at her pallid face. I gave her titanium. Improvement began from that time, and in October she was to her own feelings, and to all appearance, well; the dropsy had entirely disappeared. A small quantity of albumen remained, but she considered herself not needing further treatment, and I did not see her for some time. During the severe weather of winter there was some return of the symptoms. I gave iron, but this had no effect. Titanium was again had recourse to, and in a

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week there was already great improvement; the dropsy again gradually disappeared, and the albumen which had increased was again much reduced in quantity. As I have not seen her since May, 1867, I cannot say that the albumen is no longer present, but in August she wrote to say that she was well.

The conclusion arrived at with respect to the philosophers is that they are in much the same predicament as the dogmatists, the empirics, and the sceptics, whose circumstances we have already reviewed.

Thus it appears that the majority of medical men are content with an unthinking routine; that among those who try to think, some are dogmatists lost in speculation; some are empirics holding by nothing but a rope of sand; some are sceptics without belief in their art; and some are philosophers vainly expecting to learn from non-medical sciences what these can never teach.

The great fact which has been the permanent barrier to progress in therapeutics remains to this day :—a direct connection between diseases and their remedies has not been discovered in any of these schools of medicine.

A principle—homeopathy. There is yet another section of the medical faculty which we have not noticed. These have formed a new school professing to have found a principle or law of therapeutics.

By a principle is meant a general fact discovered by induction from a number of particular facts. The most eminent example of this is the law of gravitation discovered by Sir Isaac Newton.

This general fact or principle has been promulgated in a peculiar form by SAMUEL HAHNEMANN; the basis of his system is the action of drugs taken in health; and the rule or law is to give the drugs as remedies for the symptoms of disease similar to those which the drugs themselves produce in health. "Similia similibus curantur" is the motto expressing the method of HAHNEMANN, and its opposition to the method of GALEN, expressed by the motto "contraria contrariis curantur."

My own investigation of this method will be recapitulated in the second part of this Essay, and should the conclusions arrived at be confirmed by future observations and experiments, they will appear to be the "missing link" between diseases and drugs; they will exhibit that direct connection between diseases and their remedies which exists in nature, but which had not been previously known or taught.

Ever since there has been a profession of medicine, men have anxiously yearned after *a dogma*, a rule, or principle by which the treatment of the sick should be theoretically governed. All former attempts to discover this have failed. HAHNEMANN has made another effort, and even if it be viewed hypothetically, as a door opened for a new path of research, most assuredly it has already effected more than any preceding hypothesis, and it promises, if loyally, and at the same time critically dealt with, to result in such a "reasonable theory" as all may adopt with satisfaction.

The method is still youthful, but the facts brought to light by practical trials in the hands of educated physicians are so numerous and instructive that there is already an amount of *experience* which reduces into comparative insignificance the former experience of ages.

This mode of practice, moreover, avails itself of the vis medicatrix naturæ to the full extent consistent with the acknowledgment that art also has a duty to perform.

It opens a wide door to all the collateral branches of *science*, and gladly accepts any assistance which they can tender.

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Previous to the year 1850, several individuals in England had professed themselves disciples of the German medical reformer, and were putting forth a claim to superior success in the treatment of the sick.

To investigate this new method seemed to me to be a duty. The subject presented itself as one of the deepest interest alike to the profession and to the public. I saw that the investigation of it was spurned by those in authority, and that to undertake it would place me in a painful position towards my medical friends and colleagues, and would also involve the sacrifice of the prospects then before me. But I determined to perform it in the best manner I could, and, from time to time, to publish the results.

I have endeavoured to compel homeopathy "to give an account of itself," as I had before done with other systems of medicine; and I have now pleasure in requesting the attention of my profession to the results of eighteen years of research.

The first labour was to separate, in Hahnemann's system, what was found to be supported by observation from all that was destitute of that foundation—the former to be adopted, the latter to be rejected; and the next, to attempt to advance further in the path of investigation so begun, in the hope that, ultimately, medicine may be placed on that "more scientific basis" which Dr. STOKES and many others are longing for.

The Principle separated from the Dose.

After two years of careful study and many experiments, my first Essay was published in 1852. In this an attempt was made to explain what the new system professes to be. Several things were mentioned which it is not, and then what it is, or claims to be considered. It was asserted that homeopathy is not an infinitesimal dose, but a general fact or principle which is to guide our therapeutics.

The infinitesimal dose has received attention during the course of the Essays, but it has always been treated as a separate and subordinate enquiry. It is remarked, in the first Essay, that "homœopathy as a principle was discovered by experiments made with ordinary doses, and a physician may be a true homœopathist though he never prescribe any other."

This is a point of much importance, and deserves further illustration; but instead of giving additional cases of my own, I will record some which have been treated by another hand. I may remark that, from time to time, medical men write to me to ask information and guidance on their commencing a practical trial of the new method, and the following cases, which will be read with great interest, have been sent to me in this manner.

The writer, in his first letter, says, "I have been a medical practitioner for sixteen years, and, like most others, I fear, who have been for such a length of time acquainted with and much employed in the practice of medicine, have been often, very often, much disappointed at its uncertainties, not to use a stronger term. . . . I am anxious to go into the subject thoroughly, being quite satisfied by a recent re-perusal of your 'Investigation' that I have left, and am leaving a great duty unfulfilled, so long as I do not give homeopathy a patient practical trial."

"Arsenic.—I have frequently used arsenic in skin affections, both before and since reading your 'Investigation,' but never before perusing your book should I have thought of using this medicine in the treatment of stomach and bowel complaints. Since then I have used it frequently in what may be called chronic gastritis, or congestion of the stomach, with very marked good results; and of one case, which made a great impression on my mind, I cannot forbear giving you a short history.

" In January 1865, I was called to attend a lady about fourteen miles from my residence. I found her in the eighth month of pregnancy, suffering from great pain in the epigastrium much aggravated by pressure, constant vomiting (nothing being retained), accompanied with an apthous state of throat, tongue, cheeks and lips, from which, and from the gums, which were separated from the teeth (all the latter being quite loose), there was a discharge of tough fetid mucus. Such having been her condition for about three months before I saw her. She was, of course, much exhausted and emaciated, and was subject to fainting fits on raising the head or on any exertion, the pulse being, at the time I first saw her, almost imperceptible. I was at a great loss how to deal with such a case, the poor woman looking more like death than life; but on consideration, I ventured to prescribe one drop of Fowler's solution thrice daily. She had one dose on the night I visited her. I was summoned by telegraph the following morning to see her, and on visiting her found she had had 'a most dreadful night,' with pain in the bowels, which was attributed to the medicine, so, of course, she had taken only one drop. I found her, as I thought, somewhat better, and got her friends and herself to consent that the medieine should be continued in half doses (half a drop of Fowler to each dose), morning and evening, in a little thin arrowroot. She vomited no more from this time, and, on visiting her in five days afterwards, I found her sitting upon a couch, able to be up for a few hours, and to take food in small quantities often repeated with relish, all of which she retained without pain or difficulty. Tongue clean, cheeks and lips healthy, as well as the gums, and the teeth were again firm. I may mention that she had never taken mercury in any form. In ten days after this, or rather over a fortnight from my first visit, she gave birth to a healthy male child, which with the mother did remarkably well; she is now, and has been ever since, quite well.

"Had labour taken place at the time I first visited her, I cannot think she could have got over that ordeal in safety.

"I suppose the 'dreadful night' after the first dose of the medicine was owing to the dose being too large.

"Within the last few years I have often used arsenic, (always Fowler's solution), in a sort of gastritis in children, and within the last month I have treated four cases of such, (the youngest being eight weeks and the oldest three years of age), the chief symptoms being vomiting, great weakness, and feverishness, accompanied by loaded tongue, (which was also somewhat swollen), with red patches all round the edge, the centres of which were raised into blisters, the cheeks and lips being similarly affected, so that the child could not use the tongue or lips in sucking, nor without indications of pain, and there was evidently pain in swallowing. All these cases, and many others, have done well under the use of arsenic, and so quickly as to be very remarkable.

"Tartar Emetic.—I have frequently used this in pneumonia with the best results, the dose being about the 1/20 of a grain for adults.

"A week ago I was called to see an infant, five weeks old, suffering from severe inflammatory action in the lungs. When I first saw the child I thought it beyond medicine—in short, that it would be dead in an hour or two; it was livid, almost pulseless, a little flicker being all that could be felt, and only now and then, respirations about 45 per minute; it was altogether as helpless-looking an object as one could see. I happened to have *tartarized antimony* by me, so I took about half a grain, which I dissolved in four ounces of water, with instructions to give a small teaspoonful every four hours. I heard of the child's improvement the following morning, after three doses of the medicine, and the day after that (about thirty-eight hours after my first visit) I found the little thing almost well, and able again to take the breast; and I am glad to say it is now quite well.

"Copper.—Within the last month I have used the sulphate of copper, $(1/12}$ of a grain every six hours), in a case of what I may call 'crampy sciatica,' with the result of giving the most complete relief in the course of twelve hours, or after the third dose. This man has often had attacks of the same kind, which in some instances lasted for weeks.

"Ipecacuanha.—I have used this frequently in hæmorrhages from the lungs, and with marked good effects.

"Cantharides.—I have often used this medicine in diseases of the bladder with the best results.

" Bi-chloride of Mercury .- Since perusing your 'Investigation'

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I have frequently used this medicine in *dysentery*, both in young and old, with excellent results. I have also used it in ulcerated sore-throats—several cases. I am at present (June 1866) using it in two cases of scrofulous enlargement of the ends of the long bones, in one the humerus, and in the other the femur; and I think the former already shows improvement. The doses are $1/_{60}$ of a grain.*

Belladonna.—I have used this with the best results in scarlatina, sore-throats, headaches, hydrocephalus, and erysipelas. In hydrocephalus I have seen no cures from its use, the disease being of a tubercular nature in all the cases that I have seen; but it appeared to me, in some cases, to possess great power in controlling and preventing the convulsions which give so much distress in that disease, and are so painful to witness. In two cases it arrested such fits altogether, so far as I could judge. I have had no opportunity of testing its power in this disease, except in the tubercular variety, which I fear may be considered, without exception, a fatal disease.[†]

"In erysipelas I have used it in only two cases, and that within the last six weeks; one of them, a very severe case, commencing in the right eyelid from a small wound caused by a piece of percussion-cap striking the part while the gentleman was rifle-shooting, on a cold day with a strong east wind. The attack was very severe, extending all over the face, head, neck, chest, as low as the mamme, before and behind, and the upper extremities. What was strange to me in the case was that little or no vesication took place over the affected parts. In less than three weeks the gentleman was able for his duties again, and continues quite well.

"The second case of erysipelas, also of the head and face—a lady who had had three previous attacks, the last about two years ago, was seized with rigor, and in a few hours the heat, redness and swelling commenced on the forehead and nose. I found her, the next day, with the disease generally over the face,

* Note written in August 1867.—" The case of the disease in the humerus is now quite well. The other case suppurated, but ultimately under the same treatment healed up, and the girl is now strong and healthy."

+ We have better remedies than belladonna for these cases.

and extending to the ears, temples, and over the scalp. She had small doses of sol. ext. bell. (about two grains in six ounces of water), and in three days the disease was almost gone, and in three more she was quite well, had it not been for the desquamation of the cuticle on the forehead and nose.

"Aconite.—I have used aconite in two cases of inflammatory croup of a very violent nature, with the result that both cases did well; being the only recoveries from this disease—pure inflammatory croup—that I have met with, and am sorry to say I have seen a good many lost.

" Lead .- A lady about fifty, who for a year and a half had suffered from numbness and want of power in the muscles of the forearm. I saw her about the middle of July 1866, when I immediately prescribed for her small doses (1/12) of a grain) of the acetate of lead, night and morning, which she took for a week, when the numbress had all but disappeared, but the power of muscle was not improved. She continued for another fortnight taking the plumbum only at night, when I found her better; and in the course of another fortnight she informed me that she was quite well, but that she had been frightfully annoyed with the heat and itching of the affected arm. I ordered the medicine to be discontinued, and I understand she is now (Sept. 1866) not suffering in any way. This lady had been seven times blistered at the nape of the neck, and had otherwise been most heroically treated before I saw her, which I did only when she was threatened with a seton in the neck for the rest of her life."*

All these, and many other cases, have been treated by this able physician with small quantities of the ordinary preparations of the Pharmacopœia. He is putting the *principle* of homœopathy to a trial in his own practice, and separating it from the question of the infinitesimal dose. I cannot but think that every physician ought to be found doing the same thing. If medical men are so circumstanced that they cannot conveniently do otherwise, let them use small doses of their own drugs; where there

* For a case corresponding in some measure to this, see my Essay on *The Small Dose*. is no hindrance it is better to obtain them from a homœopathic chemist, because the doses are more manageable, and the preparations are more reliable and more uniform in strength.

HAHNEMANN discovered the principle or rule, as expressed by him in the formula "similia similibus curantur," by experiments, in health and in disease, with common drugs in ordinary doses. Having afterwards found, as he thought, that infinitesimal doses acted better than larger ones, he, very unwisely I think, tied the principle to the foot of the dose. This he did in language so arbitrary as to set aside the foundation upon which his whole system professedly rested, namely experience.

I heard no murmurings against these "words of the master" in 1850, but I took the liberty to protest against them for myself. There are still some practitioners who think homeopathy is inseparably united with the infinitesimal dose, but the majority now agree with me in asserting that there is no necessary connection between the two, that the principle is the bond of union in the new school, and that the dose is "an open question."

It is now well understood that homœopathy contains two distinct branches of enquiry:—the principle or rule by which medicines are to be prescribed; and the doses in which they are to be given.

But it is still the practice of the opponents of the new method to confound these two branches together; and in this manner, on the plea that the infinitesimal dose shocks the common sense of the profession, the whole subject has been covered with ridicule, and its advocates with contempt. Such conduct is inconsistent with science, and is unworthy of educated and honest men.

Each division of the subject claims to be investigated by itself, and I recommend medical men to follow the example of the physician whose cases I have just reported. Until their minds are settled as to the principle, the consideration of the small dose may be postponed.

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The Principle restricted to Drugs.

The future historian of medicine will see with surprise and regret a blot upon the pages devoted to the nineteenth century. He will be compelled to record the fact, for it is too conspicuous to be passed over, that the profession as a body condemned homeopathy without examination.

This examination might have been made in two ways: HAHNEMANN'S books might have been read and fairly criticised; or the doctrine taught by him might have been put to a practical test at the bed-side.

If only the first, the reading and the criticism, had been done, there would have been a show of reason in rejecting the system.

HAHNEMANN had a visionary, unscientific mind, easily led away by loose analogies and imaginary resemblances; and consequently his writings contain uncritical observations, unproved assertions, unsound conclusions, and hasty generalisations. Moreover, even in his principal work, the Organon of Medicine, he cannot refrain from applying abusive epithets to his professional brethren, or from ascribing base motives to their conduct.

From the first I have acknowledged all this, and in the course of the Essays I have shown how he has applied the principle of homœopathy to matters with which it has no connection, how he has obscured its truth and diminished its value by the hypothetical language in which he has clothed it, and how he has undermined confidence in his statements by asserting conjectures and even contradictions of himself with the same positiveness and *naïveté* that he does things which may be proved. So that if the question were one which could be settled by reading his books, I should have gone along with those who, after this examination, had agreed in rejecting his system altogether.

Homeopathy, as represented by HAHNEMANN, is vague,

indefinite, and unproved. But the investigation is one which rests on *evidence*, not on logic; on *observation*, not on argument; its only real test is a practical trial.

Such a trial in my own practice has convinced me, as I believe it has convinced every one who has made it fairly, that there is something in homœopathy, or rather something underlying it, which, when laid hold of and separated from all which has disfigured and concealed it, is a great discovery in medicine and a great benefit to mankind.

My search for this underlying truth was begun eighteen years ago, and it has never been intermitted. The progress made may have been slow and "rather the offspring of time than of wit;" but it has been progress, and I have honestly and I hope modestly placed its successive steps, as they have been taken, before my contemporaries. In this summary of them I have already explained the first of these steps, and I proceed to the second:—the limitation of the principle.

Nothing can be more disturbing to a sober mind than the loose manner in which HAHNEMANN explains and applies the doctrine of "similia similibus curantur." It soon became evident to me that unless this principle could be reduced to a more distinct and substantial form, it could not retain more than a very partial and temporary hold upon "thoughtful men." Three Essays were devoted to this part of the enquiry, and to these I must refer my readers for details. The nature of a principle, and how this therapeutic one has its limits with respect both to diseases and to remedies is shown in them.

HAHNEMANN first endeavours to prove that nature teaches us homeopathy by causing *similar diseases to cure each other*; but he totally fails in being able to bring forward one tolerable example. He tries to get out of this dilemma by remarking with singular simplicity, "We should have been able to meet with many more true natural homeopathic cases of this kind, if nature had

not been so deficient in homœopathic auxiliary diseases!" He proceeds thus : " mighty nature herself has, as we see, at her command, as instruments for effecting homeopathic cures, little more than the fixed miasmatic diseases,-the itch, measles and small-pox! Which as curative agents are either, (namely small-pox and measles), more dangerous to life, and of a more frightful character than the disease they are to cure; or of such a kind, (like the itch), that after they have effected the cure, they themselves require curing, in order to be eradicated in their turn; both circumstances that make their employment as homeopathic remedial agents difficult, uncertain, and dangerous. And how few diseases are there to which man is subject, that find their analogous remedial agent in small-pox, measles and itch!" To propose to inoculate with smallpox as nature's remedy for an inflamed eye, would be as unreasonable as to prescribe submersion for some minutes as a cure for a cold caught by getting wet; without doubt both would be "dangerous."

In the Essays referred to it will be seen that HAHNE-MANN also applied the principle of homœopathy to the action of *mental emotions* upon each other; but to prove that it does so apply there is neither analogy nor evidence.

He would also have us believe that the effects on the human body of the physical forces of inanimate nature, heat, light, electricity, and magnetism—are governed by the same law.

I have examined (in the Essays) each of these forces in detail, and end with this remark : "For myself, I cannot but conclude that HAHNEMANN is quite in error when he supposes that the homœopathic law can, with any show of propriety, be applied to the action of the physical influence of any of the so-called imponderable agents."

Only drugs remain; but as regards these there is sufficient evidence to compel the admission that "a relation exists in nature between the effects of material poisons on the healthy frame, and the effects of the same poisons on diseases resembling those which they are capable of producing." (Essay on the *Remedies*.)

In the same Essay, HAHNEMANN's definition of the principle is rejected, and the following is suggested in its place :--

"Every material poison gaining admission into the healthy body has a tendency to produce a diseased condition, (evidenced by symptoms or physical signs), more or less peculiar to itself; and every such poison is the most appropriate remedy for a similar diseased condition which has arisen from other causes."

Again, (in the first Essay on the *Principle*,) the same conclusion is stated in these words :---

"That there is a natural relation between the disease producing and the disease healing powers of drugs is, I think, clearly made out."

This criticism on the wide application of the principle of homœopathy by HAHNEMANN was strongly objected to by his school on its first appearance; but the limitation to drug action as then suggested is now generally received.

The Local Action of Drugs.

A diseased condition, whether arising from drugs or from other causes, may be supposed to have been produced either by a general or by a local action.

HAHNEMANN looked upon all diseases as derangements of the *vital force* or life of the body; and he asserts that the action of drugs is also upon this force or life. This view implies a *general action* both by morbid influences and by drugs.

The practical consequences of this doctrine are seen in his *Materia Medica*, in which he records the effects of drugs taken in health, or the physiological action of medicines. In these "provings" each drug has symptoms attached to it connected with every organ of the body. I do not adopt this view. It is simply a conjecture that "in disease the vital force only is primarily morbidly deranged" (Organon); a conjecture like those made by the Dogmatists, against which HAHNEMANN declaims so fiercely as idle dreams. Not only does it not rest upon any facts which prove it, but, as it appears to me, it is incapable of proof.

That each drug acts in the same manner, and so produces symptoms or effects over the whole body, is, I think, also a mistake.

It will be useful to reflect further on this question, with reference both to diseases and to drugs.

CULLEN, whose Nosology was the best of the last century, divides all diseases into four classes :--Pyrexiæ, Neuroses, Cachexiæ, Locales. The last would seem to imply from its name, that the rest are general and not local diseases. But the names of the others are sufficient to refute this inference. Pyrexiæ or fevers are diseases of the blood and of its circulation. Neuroses are disturbances of the nervous system. Cachexiæ a vitiated condition of the fluids.

MASON GOOD has given the best Nosology of the present century; he arranges all diseases thus :---

Cœliaca—diseases of the digestive function. Pneumatica—diseases of the respiratory function. Hæmatica—diseases of the sanguineous function. Neurotica—diseases of the nervous function. Genetica—diseases of the reproductive function. Eccritica—diseases of the excernent function.

Now these and all nosological arrangements, are founded upon the fact that the phenomena of diseases are *local*; and this fact proves the *local action* of their causes.

It is true I have often heard patients say, "I am ill all over!" And no doubt they feel so. But physicians by careful enquiry can separate such general malaise into local ailments; just as astronomers, by the telescope, can resolve nebulæ into separate stars.

Diseases, then, in their causes, origin and seat, are local. That the same may be said of the action of drugs is, I think, equally certain.

As works on Nosology are founded on the local character of diseases, so treatises on Materia Medica and Pharmacology are based on the local action of drugs.

We have no writers of greater eminence on these subjects than PEREIRA and CHRISTISON.

PEREIRA, in his *Materia Medica*, gives, among others, the following arrangement of drugs, which it will be seen corresponds, except in the order in which they are given, with Dr. MASON GOOD'S classification of diseases :--

α.	Acting	on	the	blood	Hæmatica.
β.	Acting	on	the	respiratory organs	Pneumatica.
γ.	Acting	on	the	nervous system	Neurotica.
δ.	Acting	on	the	digestive organs	Cœliaca.
ε.	Acting	on	the	excernent system	Eccritica.
ζ.	Acting	on	the	reproductive organs	Genetica.

All these are obviously local actions.

CHRISTISON is decided in taking the same view. In a former Essay I have quoted part of a sentence from him on this question. His words so exactly express my notion that I shall take the liberty to extract the whole passage:—

"Of the organs affected by the remote action of poisons.—Having now taken a general view of the mode in which poisons act on distant parts, I shall next consider what organs are thus brought under their operation. Poisons have been often, but erroneously, said to affect remotely the general system. A few of them, such as arsenic and mercury, do indeed appear to affect very many organs of the body. But by much the larger proportion seem, on the contrary, to act on one or more organs only, not on the general system. Some act chiefly by enfeebling or paralysing the *heart*, others principally by obstructing the

pulmonary capillaries, others by obstructing the capillaries of the general system, others by stimulating or depressing the functions of the brain or of the spinal chord, others by irritating the alimentary canal, others by stimulating one or another of the glandular organs, such as the salivary glands, the liver, the kidneys, or the lymphatic glands."

CHRISTISON here speaks of "poisons;" but what he says of them is true of all drugs, whether they be called poisons or medicines; for "medicines," as was said by LINNÆUS, "differ from poisons not in their nature, but their dose."

It may seem unnecessary to give instances of the appropriation of individual drugs by particular organs, inasmuch as every drug and every organ are examples. Nevertheless, it may be useful to some minds to have the fact thus distinctly exhibited. I will therefore mention as illustrations, half-a-dozen well-known metals from the mineral kingdom, and as many plants from the vegetable kingdom.

Gold acts on the brain and the bones.

Silver on the joints, their ligaments and cartilages.

Copper on the muscles, producing cramps and convulsions.

Lead on the muscles, producing paralysis.

Antimony on the stomach, bowels and lungs.

Bismuth on the spinal chord, heart and alimentary canal.

Opium acts on the brain—the venous circulation. Belladonna on the brain—the arterial circulation.

Nux vomica on the spinal chord.

Aconite on the heart and arterial circulation.

Digitalis on the heart and kidneys.

Aloes on the rectum.*

Some drugs (especially mercury) have been given in

* It is not meant that these are all the organs acted upon by the twelve drugs here named.

such large quantities, and the giving of them persevered in for such a long time, that it may be supposed that the organs which have a specific relation to them have been more than saturated by them, so that the overflowings have found their way into other organs, producing further mischief and strong natural efforts to expel them.

Other drugs appear to act more generally because they are blood poisons, such as secale, sumach, &c.; others because they have a profound action upon the ganglionic system of nerves and vegetative life, as sulphur, lime, &c.

The remarkable action of bichromate of potash on the septum of the nose, through which it bores a hole; of cantharides on the bladder; of ruta on the wrist; and of many other drugs on special organs might be dwelt upon; but the general fact seems to me to be so obvious, that I cannot suppose a larger number of individual examples can be required.

I conclude, therefore, that the action of drugs upon the human body, whether taken in health or in disease, is *local*.

Organs the Seat of Symptoms.

Another step next presented itself. Having satisfied myself that the investigation of the principle of homœopathy was limited to the action of drugs, and that this action was local, the next duty was to enquire if a better application and consequently a better definition of the principle could be found.

It is well known that HAHNEMANN insists upon symptoms as the sole object of attention. With him "the disease consists only of the totality of the symptoms." A similar totality of symptoms is to be searched for among the provings of the drugs in health, and the drug under which all these symptoms can be found, is the best medicine the patient can have. HAHNEMANN says he "takes note of nothing in every individual disease except the changes in the health of the body and of the mind (the symptoms), which can be perceived externally by means of the senses."

It will not be denied that this is a superficial view, but it is one still very earnestly contended for by many homœopathists. I lately read that a distinguished author "severely censures those practitioners who attempt to treat their patients in accordance with the general and pathological clinical indications, instead of adhering strictly to the ' totality of the symptoms.'"

I remember being present, now more than forty years ago, during a conversation between two elderly medical men, great practical observers and eminent men in their day, which concluded with these words: "After all, we must generally be content to prescribe for symptoms." This made a deep impression on my mind at the time, and turned the suspicion I already entertained into a conviction of the imperfection of the art of healing. If we are not to look beyond the outward sign, how often must we be misled! Well might HIPPOCRATES exclaim that he "would give great praise to the physician whose mistakes are small."

As opportunities for observation increased, I found the prescribers for symptoms were common; while those who were not content with such a superficial mode of practice, but who endeavoured by reasoning on the phenomena to penetrate into the mystery of disease and to guess at its nature, were soon lost in a bewildering labyrinth.

On meeting with HAHNEMANN I found the symptom practice, which hitherto medical men had scarcely acknowledged even to themselves, openly defended and boasted of as an essential part of the only true method.

If the alternative were this,—either adopt one of the many hypotheses upon which a method of treatment has been based, which hypotheses may be as beautiful but certainly are as unsubstantial as mountains of clouds; or be content to prescribe for symptoms; then I grant that

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my two old friends, and HAHNEMANN, and those who follow him, sit on the best horn of the dilemma. The experience of three thousand years has rendered hopeless the attempt to discover the inner nature of diseases, and has justified the inference that a pathology of *this* kind can never be a safe guide to therapeutics.

But there is a third path which, while it cannot be objected to as superficial, cannot, on the other hand, be condemned as speculative and hypothetical. By this path a search may be made after the *seat* of diseases—the organs in which the symptoms have their origin. For symptoms are outward signs of something signified within. We may not be able to find out *what* that something is, but we may learn *where* it is, and that is a step beyond the sign.

I could not but try to learn this. Speculation as to what diseases are, has long been a wardrobe to furnish to those who enter into it a cap and bells, and I have felt no inclination to follow them. But to ascertain the seat of the symptoms seems practicable, because it admits of being enquired into as a *fact*.

This then is the step which I have recommended homœopathists to take. It will be real progress. It will preserve the new school from the danger which threatens it of falling into *routine*; and when it is taken the mine of medical science will again resound with axes and hammers.

If it be objected that there are many cases in which we cannot find the seat of the symptoms, I reply that this is more than the objector knows till he has tried; but I admit that till we have found this out, there is no better way of prescribing than for the symptoms themselves. But our present ignorance ought to stimulate exertion, not to stifle it. Already we know the seats of some symptoms; we must labour till we know the seats of them all.

This enquiry into the seat of symptoms is rendered

possible and useful by two facts; the one, that diseases have a local habitation, the other that drugs have a local action.

That diseases are not merely derangements of the vital principle, but that they affect special organs or constituent parts of the body, and so are local, and that drugs act locally also, has I think been sufficiently proved in this and former Essays; and I have no doubt will in due time be generally accepted as true.

The organs which are affected by different diseases must be discovered by observations on the sick.

The organs which are affected by different drugs must be discovered by experiments on the healthy.

By these observations and experiments the natural connection between diseases and drugs is made known. This was the "missing link." From this knowledge a therapeutic rule, based on nature, is possible and may be thus expressed :—

Drugs to be remedies must affect the same organs as the disease affects.

This is Organopathy. It has for its foundation not merely the resemblance of the symptoms in the disease and in the drug, but the identity of their seat.

Among the advantages of this view over that of HAHNE-MANN's are the following :---

It is more definite. The principle, as expressed by HAHNEMANN (similia similibus, &c.), is necessarily indefinite, for resemblance admits of degrees. The greater the similarity, says HAHNEMANN, the greater the homœopathicity of the remedy, and the smaller is the dose that is required. I believe this is true; but then it implies that there is a less and less similarity, and a less and less homœopathicity; and who shall say where similarity ends and difference begins?

These considerations show that, admitting HAHNE-MANN'S proposition to contain a truth, it can be received only pro tempore, as a transitional expression of the truth it contains. There is *prima facie* evidence in support of it sufficient to demand a trial. After such a trial, anxiously and perseveringly carried on, my judgment is a definite one:—Look at the organ which is diseased, and seek a drug, as a remedy, which is known to be appropriated by, or to act upon that organ.

It recognises local action. In HAHNEMANN'S Materia Medica Pura, as I have already remarked, symptoms are put down as belonging to every organ, and produced by every drug. He has overlooked this very obvious property of drugs, and has attributed to them a sort of general or universal action. It seems to me impossible to prescribe medicines at all, either according to the practice of the old school or to that of the new, except by taking advantage of the partial or local effects produced by all drugs.

It turns diagnosis to better account. A physician cannot perform his duty, in the examination of a patient, unless he strive to obtain a distinct notion of the situation and extent of the malady. Without a careful diagnosis he cannot give a probable prognosis. The friends of every sick person urgently desire a prognosis; it is due to them to be told the probable issue of the illness. Now, if the therapeutic rule be accepted in the form here given to it, a good diagnosis answers an additional purpose, not less important than the first—it becomes the true guide in the choice of the remedy.

It helps to remove a difficulty. It is well known that many symptoms have opposites to them; and in the provings of drugs which we have at present, these symptoms and their opposites belong to all the more powerful medicines. This fact is necessarily perplexing to those who wish to select a remedy according to the rule "similia similibus," &c. This perplexity almost disappears when we adopt the view now proposed.

It prevents the accumulation of useless symptoms. This accumulation of symptoms is a growing evil. Already many drugs have more than a thousand symptoms attached to them in the provings; these no memory can retain. Every new experiment adds to this number, and increases the labour of prescribing, and the perplexity attending the selection of a remedy. On the plan now recommended, every proving which decides the locality of the action of a drug is a definite gain; hundreds of recorded symptoms may be blotted out as useless; and, to the medical man skilled in pathology and diagnosis, the toil and difficulty of prescribing is greatly diminished.

It is a step in advance. The observations already made are a sufficient proof of this. All who take the step will be conscious of real progress,—a progress so real, that none will deny it but those who, from whatever motive, refuse to take it.

Such is the method I have been led to adopt Such also are the grounds upon which it rests, and some of the advantages which recommend it. A few remarks on cases which present little more than the commonest symptoms may be offered in illustration.

Cases in which nausea and vomiting, with a consequent loss of appetite and strength, are the only symptoms, are common; such symptoms are also produced by a numerous class of drugs; so that, if the selection of the remedy is to be made from a simple comparison of the symptoms, it must become either a matter of routine or a matter of chance. But if an endeavour be made to discover the organ from the disturbance of which these common symptoms proceed, something may be done which will be much more satisfactory. For example, it may be ascertained that the seat of the ailment is in the mind; or in the brain; or in the spine; or in some other remote organ of the body; or it may be in the stomach itself. In this way the indication for ignatia; or belladonna; or nux vomica; or sepia; or ipecacuanha; or some other drug, may become very plain.

In like manner, a headache, or a palpitation of the

heart, or a pain in the shoulder-blade, needs a pathological investigation, before we can fix with satisfaction upon the remedy.

Again, it is well known that *coughs* are very various. I have heard it said that there is no remedy for a cough. A principal reason why coughs are thought incurable is that the seats of the irritation which causes them are different, and often difficult to discover.

Sometimes coughs have their origin in the stomach : these I have repeatedly seen cured in a few minutes by a dose of pulsatilla. Other coughs originate in the liver; these, after "cough medicines" have entirely failed, are often cured by mercurius. There are also throat coughs; and laryngeal coughs; and tracheal coughs; and bronchial coughs; and lung coughs; and coughs from affections of other organs still. Some of these are really incurable in the present state of our knowledge, particularly when the cause is tubercle or cancer in the lungs; and some, though not incurable, are necessarily tedious, from the mere extent of the bronchial or other affection; the rest are cured or not, just as the physician discovers or not, the organ where the irritation exists, and selects, or not, the drug for which that organ has a specific or elective affinity.

In 1860 I was consulted by a married lady who had a chronic dry cough, being otherwise in excellent health. The cough had followed an attack of hooping-cough in 1855; it was spasmodic, and the fits were excessively violent at times, but did not resemble hooping-cough at all. Many doctors had been consulted during the five years, and all had failed even to relieve the cough. I could not discover the local origin of the irritation; I tried several remedies, as one firing shots without a mark, and I failed also. I do not know what further means have been tried, but the cough has continued seven years longer.

In 1866 Miss ---- consulted me for a cough which had

troubled her for fifteen years, which was more than half her life. She described it as a tickle in the throat which produced a dry cough without expectoration; the fits of coughing were at times severe, and prevented her from going into company, and almost from going to church, on account of the disturbance they occasioned. She was otherwise in good health. Several physicians, some of the old school, others of the new, had been consulted during this long period, but she had derived no benefit from any one. After some enquiry I arrived at the conclusion that the seat of the irritation, which caused the cough, was the uterus, and I gave her *sepia*. In a few days the cough ceased, and there was no return of it for more than a year. When it did come again it was quickly removed by the same remedy.

Component Parts of Organs.

We have seen that in every case of disease it is necessary to discover what organs are primarily and chiefly affected; and that in the proving of drugs a similar discovery is required to be made. I now advance a step further. We have next to consider that important organs are not simple but complex structures. Hence two questions arise, one in respect to the disease, what part of the ailing organ is affected? and one in respect to drugs, (when more than one act upon this ailing organ), which acts upon the affected part? The former question obliges an accurate diagnosis in disease; the latter a similar accuracy in experiments in health.

In the diagnosis of disease, physicians have already made considerable progress towards answering the question. For example, in diseases of the chest; affections of the covering of the lungs (such as pleurisy and hydrothorax), of the pulmonary substance (as pneumonia and tubercle), and of the lining membrane (as bronchitis), have been well separated from each other. In diseases of

the abdomen, affections of the coverings of the intestines (as peritonitis), of the middle or muscular coat (as colic), and of the lining membrane (as enteritis), and also diseases of the mesentery and its glands, have been distinguished with precision.

But towards furnishing an answer to the question when applied to drugs and their therapeutic use, little has been attempted. On the contrary, even when much labour has been spent in examining a case, and a careful diagnosis has been made, we commonly hear it said that " the treatment is to be conducted on general principles." This means either that the antiphlogistic plan is to be adopted, as leeches, purgatives, and refrigerants; or tonics are deemed necessary, as quinine, porter, and wine.

PEREIRA, expressing the prevailing sentiment of the old school, says: "In the present state of our knowledge, a physiological classification of medicines cannot be satisfactorily effected."

HARTMANN, one of the best practical writers of the new school (speaking of brain disease), says : "We shall include the symptoms of the different varieties in one group, for the reason that it is scarcely possible to separate them from each other, and that such a separation would have no practical value."

And so we are apt to think of knowledge of which we are not at present in possession, either that it is unattainable, or worth little; which knowledge, when discovered, we may be compelled to own is of the highest value. We ought neither to despair nor to underrate. Nothing hinders progress so much as desponding about or despising what is not known; and, as to the subject in hand, even PEREIRA admits that "it cannot be doubted that had we a more intimate acquaintance with, and precise knowledge of, *the action of remedies*, the therapeutical properties of medicines would no longer appear incomprehensible and mysterious."

This precise knowledge of the action of remedies is to

be obtained by careful provings; that is, by experiments on the physiological action of medicines, experiments in health, by which the exact locality of the action of each drug may be learnt. And this not only as to the organ acted upon by each drug, but also as to the particular part of each organ.

In proportion as this is done, the use of medicines will be transferred from a method resting on conjecture to one based on science, and possessing a degree of accuracy hitherto unknown.

In illustration of this advancing step in diagnosis and treatment, I may remark that

The brain may be the ailing organ; but the part affected may be the arteries, or the veins, or the cerebral substance, or the membranes. And the drug should be made to correspond; and so this may be *aconite*, or *belladonna*, or *opium*, or *phosphorus*, or *hellebore*, or *hyoscyamus*, or *stramonium*, or some other.

Or the *heart* may be the seat of disease; then it may be the pericardium, or the muscular fibres of the auricles or of the ventricles, or the lining membrane, or the nerves, or the valves. And the remedy may be *aconite*, or *bryony*, or *arsenic*, or *bromine*, or *digitalis*, or *kalmia*, or *bismuth*, , or *spigelia*, or *bovista*, or some other perhaps yet unknown drug.

Or it may be a large *joint*, as the *knee*; and the part affected may be the cellular membrane, or the muscles, or the ligaments, or the cartilages, or the bones. And the remedies may be *arnica*, or *bryony*, or *rhus*, or *silver*, or *mercury*, or some other.

Or it may be one of the organs of the senses. Look at the eye, and it is required to find drugs which act upon the conjunctiva, the cornea, the iris, the lens, the humours, the retina and optic nerve, the sclerotic coat, the muscles. The organs of hearing, smell, and taste, and in fact all the parts of the body ask for similar attention.

We arrive at the conclusion that the goal which phy-

sicians should have before them is a perfect knowledge of the diagnosis of disease—not of its nature, but of its symptoms and its seat; and a similarly perfect knowledge of the local action of drugs. When these can be placed side by side, the true relation between them (the missing link) will be recognised. And when, in addition, the doses in which the medicines are to be given can be adjusted, the art of prescribing will have attained all the perfection it is capable of. The part of my subject, therefore, which remains to be considered is the *dose*.

The Dose.

Many are the pleasant phantoms which are joyously pursued by lively people, which others must neglect; many are the subtle questions, mirage like, which are debated with eagerness by imaginative people, which others must refuse to notice. Doses of medicines are neither a pleasant phantom, nor an attractive mirage; they are a painful reality; they command attention and make men grave and thoughtful, for they come before them on grave and thoughtful occasions, in the presence of suffering and in the prospect of death.

"Be assured," said QUINCY, at the beginning of the last century, "that the true and only secret in physic is *how to give a medicine.*" This secret contains the choice of the remedy and its dose. We have passed in review the selection of the drug, it remains that we consider how much of it is to be given at one time.

There is a preliminary difficulty which must be removed before this subject can be discussed to a useful purpose between the members of the old school and those of the new.

In the old school professional men are thoroughly impressed with the notion that a medicine must be given in such doses that some observable effect is produced by it. There must be an "opus operans." The dose must produce vomiting, or purging, or sweating ; or it must blister or otherwise notably punish the patient. Every case is supposed to present certain indications for one or more of these unpleasant operations, and medicines are prescribed with the intention to perform them. The medical conscience is distressed with the sense of a dereliction of duty if these enterprises are omitted ; and when patients recover it is believed that good has been done by this rough and roundabout process.

This notion is so tenaciously held by the medical mind that it is very hard to expel it; nevertheless, it must be expelled before the argument can be commenced and conducted on the same platform and on equal terms.

Fortunately, the first step to this platform has already been taken by the whole profession. It is allowed that "alterative" doses of medicine may be given. These are doses too small to produce the disturbances commonly designed, but they are acknowledged to be capable of affecting, "in an imperceptible manner," diseased organs, so as to promote their restoration to health. In the estimation of the elder branch of the medical family these are the light troops which are intended to assist the heavy artillery.

Imperceptible action, viewed as a principle, is admitted, and it is frequently adopted in practice. The proposal, therefore, that this principle should govern all, or nearly all treatment by drugs ought not to shock the medical sentiment. When the thin end of a wedge has found an entrance, it is always possible to drive it further.

In a former Essay this imperceptible action on diseased organs is called *direct* treatment, in opposition to the violent action on healthy organs, which is *indirect*. SIR JOHN FORBES, in his last publication, has adopted the same designations.*

It is to be understood, therefore, in the present discussion that, as far as the use of drugs as remedies is

* Of Nature and Art in the Cure of Diseases, p. 206.

concerned, they are to be given in such doses only as shall be followed by no effect but that of restoration to health.

Drugs taken in health in order to learn their physiological action, must of course be taken in doses sufficient to produce symptoms showing that certain organs have been disturbed; and these symptoms are noticed and recorded as the natural effects of the doses taken.

Drugs given in illness in order to cure the patient, are to be given in such doses as will be followed by a cure only. And, when prejudice does not blind us, the removal of disorder or disease in this manner will generally be as obviously the effect of the drugs, as the production of disturbances is their effect in the provings. It is true that nature accomplishes cures sometimes, or in other words, people "get well of themselves;" but it is also true that an unprejudiced and careful observer, guided by a reasonable scepticism, will seldom be at a loss to distinguish these natural recoveries from the cures effected by remedies.

Reason and common sense will admit that doses which are followed by a cure and by nothing else are perfect doses; and yet this very perfection is the traitor which substitutes hesitation for confidence, and deters the public from a hearty reception of homœopathy. The impression that medicines to do good must produce some violent effects is so deep, and has been so long continued, that it is difficult to believe that good is being done without these effects; and medical men are tempted to take an ungenerous advantage of this impression where it exists, and to do their best to reproduce it where it has lost its hold.

Truths are like mechanical solids, they have more sides than one. For our present purpose the subject before us has two aspects : one looking towards the patient, the other towards the drug. The side towards the patient has been already diligently examined by the elder school. Among others, Dr. PARIS has enumerated the points to be attended to. With respect to the patient he says :--

"The operation of medicines is influenced by certain general circumstances, which should be kept in mind when we apportion their *dose*, *e.g.*, age—sex—temperament—strength of the patient —habit—diet—climate—duration of the disease—state of the stomach—idiosyncrasy."

This aspect of the question, therefore, need not detain us. It must be remarked, however, that good sense has not always been the guide in its consideration; for example, the mechanical physicians of the last century determined (as quoted by Dr. PARIS), that the dose must be according to the constitution of the patient, and be governed by a mathematical formula thus expressed:— "The doses are as the squares of the constitution!" The absurdity of this does not appear to have struck Dr. PARIS sufficiently, for he himself gives another mathematical formula which, he says, has been proposed by Dr. YOUNG.

We turn to examine the aspect which is towards the drug, and we shall assume that the prover or the patient is an adult without peculiarities or idiosyncrasies.

This again has two sides: one exhibits the doses required for proving in health, the other those employed for healing in sickness.

The questions connected with the first side—the doses for provings—have scarcely been suggested, much less have they been investigated, or their details determined. This is a region unexplored as yet, even by the section of the profession which is most advanced. I venture to offer the following observations:—

We have seen that *drugs* are characterised by acting locally; every drug being appropriated by one or more organs of the body. This local action produces disorder

or disease, and thus each drug may be distinguished from the rest.

It is surprising to find that different doses of the same drug are sometimes characterised in this manner also. They differ from each other by acting upon different organs.

It follows from the discovery of this fact that these different doses need proving in health, as if they were so many different drugs. To this extent *organopathy* applies to doses as well as to drugs.

HAHNEMANN has taken no notice of this fact. He has not even thought it necessary to tell us the doses which were used in his experiments.

In many provings which have been made since his time, the doses taken have been mentioned; and some knowledge of the subject may also be gleaned from the writings of CHRISTISON and PEREIRA. But for the most part it is a mine unworked which will reward labour.

I have mentioned, on a former occasion, as examples :--

Tartarized antimony, which in one dose acts on the skin; in another on the stomach; in another on the bowels; and in another on the lungs.

Oxalic acid, which in one dose acts like opium on the brain; in another like strychnine on the spinal chord; in another like prussic acid on the heart; and in another like a mineral acid on the stomach. (CHRISTISON.)

When different doses of the same drug act upon the same organ, they often act in a manner *opposite* to each other. This fact is better known than the one last mentioned. Familiar examples are—

Opium, which acts upon the brain in different doses; one dose will excite and another stupify.

Digitalis, which acts on the heart in different doses; one dose will retard and another accelerate its movements.

Rhubarb, which acts on the bowels in different doses; one dose will purge and another constipate. In HAHNEMANN'S Materia Medica, which is the history of his provings, this antagonistic action is everywhere apparent. For instance, the secretions of the different secreting organs are both diminished and increased by the same drugs. These opposite effects are not connected, as I think they should be, with different doses; so that, as matters stand at present, a medicine might often be prescribed ostensibly on the principle of "contraria contrariis curantur" quite as well as on that of "similia, &c." The opponents of homœopathy have not yet advanced this fact as an objection; should they do so the reply is ready: this apparent inconsistency arises mainly from the use of different doses.

The doses which should be taken in the physiological experiments I have briefly indicated in the paper read before the British Association for the Advancement of Science. I there protested against experiments with poisonous doses upon *animals*, because "any advantages to be derived from them do not compensate for the cruelty." Moreover, they are calculated to mislead rather than to guide aright; the action of drugs upon animals being often very different from that upon man.*

Some drugs act safely and sufficiently in small quantities of the crude substance or in tincture, as rhubarb; these may be taken both by provers and by patients in this form.

Some require to be minutely divided to render them safe; as arsenic.

* This fact has been known for many centuries, at least since the time of LUCRETIUS :---

"Præterea nobis *veratrum* est acre venenum, At capris adipes et coturnicibus auget."

Lib. iv., 640.

And again :-

"Quippe videre licet pinguescere sæpe cicuta Barbigeras pecudes homini quæ est acre venenum."

Lib. v., 899.

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Some require to be minutely divided to make them active; as mercury.

The majority of the metals it is well known are inert in their ordinary metallic state. Before being experimented upon they require to be reduced to a state of very fine pulverisation. This is done by triturating them with a small quantity of a convenient substance, such as sugar of milk. Of this trituration so much may be taken that a grain, half a grain, or quarter of a grain of the metal shall be contained in each dose. These doses may be repeated at fixed intervals. Such doses will be found to be capable of producing physiological effects-they will make the prover ill. These are to be considered large doses. In the same manner by trituration, a grain of metal added to ninety-nine grains of sugar of milk, can be divided into a hundred parts; a grain of this triture can be divided again into a hundred parts, and the process may be repeated a third time. These are called the first, second, and third centesimal triturations. A grain of either of these is to be understood as a small dose.

Other substances, also inert in their crude form, as carbonate of lime, silica, carbon, &c., and some chemical compounds of the metals, are to be treated in the same manner.

All soluble substances, as salts, and all vegetable juices are to be dissolved in either water or alcohol; the solutions must vary in strength in proportion to the poisonous activity of each substance, for the large doses; and the small ones should correspond in strength with the tritures; a grain of a salt or a drop of the vegetable sap in a hundred drops of water or alcohol, forming the first centesimal dilution; from this the second, and from the second the third, being made in the same manner.

I may add that while, on the one hand, in provings, doses should be as large as can be safely taken, that is, without serious or permanent injury to the health of the experimenter; on the other hand, they should extend to these first, second, and third triturations and dilutions, for the reason that in them the drugs can still be recognised either by the senses, or by chemical analysis, and therefore it is certain that they are present, and it may be expected that they will produce physiological effects.

All these doses are included in the term "medicinal." It is not only possible but very easy to prepare still smaller doses, called infinitesimal, and they also may be experimented upon.

This is the side of the doses for proving in health.

Let us now look at the other side, that which relates to the doses to be employed for healing in sickness.

This is a very important subject for, in the words of Dr. PARIS, "the dose alone very often determines the specific action of the remedy." At the same time it is a very difficult subject, and therefore much allowance must be made for any observations upon it which may be offered.

I think it is clear that the only direction in which the various questions connected with doses can meet with satisfactory answers is that towards the drugs, and the provings of them in health. All efforts made in the direction of the patient have failed. And I believe that a rule for the dose will be obtained *from the provings of different doses*, in the same manner as a rule for the remedy has been found from the provings of different drugs.

It is certain that drugs act upon the same organs in sickness that they act upon in health.

It is also certain that different doses of some drugs, given in disease as in health, act upon different organs. In so far as this is the case they must be treated as if they were different drugs under the guidance of organopathy. Nearly all the details belonging to this part of the subject require to be better ascertained by new experiments.

Moreover, it is certain that different doses frequently

act, as in health, on the same organ, but in opposite directions. To take opium and arsenic as examples :---

I suppose no one will doubt that some doses of opium given in apoplexy would increase the mischief; or that a similar result would follow some doses of *arsenic* in gastritis.

But it will be found upon trial that some doses of opium will cure even apoplexy, when that dreadful malady can be cured at all; and that some doses of *arsenic* will cure gastritis, even when, from ample experience, it is most probable that the patient would have died under other treatment.

It has been repeatedly observed, in this and preceding Essays, that *local action* is the characteristic of drugs; and that the different organs upon which this local action is exerted distinguishes one drug from another. I think the *kind of action* on the same organ characterises the dose; but additional provings are needed to establish this.

What I mean by kind of action will be best explained by examples. It is well known that belladonna dilates the pupil, and that opium contracts it. But these effects follow only certain doses of these drugs; other doses produce the opposite effect, so that belladonna sometimes contracts the pupil, and opium sometimes dilates it. When the doses which, respectively, produce these effects have been better determined, this knowledge will help in the choice of the dose. If the dose of belladonna which dilates the pupil is larger than the dose which contracts it, then the dilated pupil will indicate a larger dose, as a remedy, than the contracted pupil. And if opium reverses this action, and a larger dose contracts the pupil than that which dilates it, then the indications for the dose of opium as a remedy will also be reversed. This will be organopathy as regards the iris-the seat of the local action: and homeopathy as regards its contraction or relaxation-the kind of action. Possibly, this may apply generally and become the rule of the dose.

I think that the more violent action of some drugs and doses point them out as the suitable remedies in acute disease; and that the slower, less obvious, but more permanent action of others indicates them as remedies in chronic disease.

It is to be understood that a suitable *repetition* of the dose is included in these observations. Some doses, to produce their effects, require to be frequently repeated. This is known in the elder school. Dr. PARIS remarks that "the action of alteratives may be more effectually answered by exhibiting small doses at short intervals."

But this repetition is not to be indefinitely prolonged. Here again a direct contrast occurs between the old and the new method; in the elder school, when a prescription is believed to have done good, it is usual to advise its continuance on that account; in the new school, when a remedy has acted beneficially, it is generally best to discontinue it.

Another fact of interest and importance requires to be noticed:—a drug which has power to act upon several organs, when given in small doses will act upon the one which is diseased, and will pass harmlessly through the healthy ones, *e.g.*, *belladonna* acts on the brain, the eyes, the throat, and the skin; it may be given to one patient for ophthalmia, and to another for sore-throat, and cure both without affecting the other organs in either patient. If a headache has been produced the dose has been too large. This fact is a great recommendation of the small doses, and the reason of it I take to be that the dose is large enough to make its presence felt by the morbidly excited part, but not by the healthy ones.

If we aim at certainty in our practice, the *limits* of our range of doses as remedies should be nearly, they cannot be exactly the same as those adopted in our provings. Larger doses may be taken in health than can be given in disease; and smaller doses have power to act in disease than can be satisfactorily proved in health, unless it be by very sensitive individuals. Each organ as well as each drug has its own range of doses. We depart from our principle when we give doses very far removed from those which have been proved.

During the discussion on the Paper read at the meeting of the British Association at Nottingham, one speaker objected to the use of provings as recommended in the Paper, that drugs sometimes require to be given in much larger doses in disease than is necessary in health to produce the same effect. *Opium* was mentioned as an example, and the very large doses which were sometimes required to procure sleep.

The reply to this objection is that the subject is the *alterative* or *inappreciable* action of drugs when used as remedies; and therefore the fact alluded to has no bearing upon the matter in hand, which does not include the prescribing of any doses for such purposes. As has been already remarked, doses taken in health as experiments in physiology, or as they are now more frequently called provings, must be large enough to produce obvious effects —effects sufficient to characterise the drug. In this way medical men may gratify their inclinations in favour of large doses to the full; they may make themselves suffer from medicines as much as they like; but when doses are prescribed for patients the object should be to give them just large enough to cure the ailment, not large enough to produce any effect characteristic of the drug.

I have hitherto, in the successive Essays, restricted my observations to matters of fact; I will add here, that such of my readers as are of a speculative turn of mind may engage in a series of experiments to discover, if possible, whether the mechanical force developed in the trituration of drugs has any effect upon them besides the minute division of their particles; whether any *drug-force* is generated, after the theory of Mr. GROVE, which he calls "the correlation of forces;" and whether the nerve force of Dr. CARPENTER has any special relations with this drug-force. It is a well ascertained fact, hitherto quite without explanation, that drugs act upon organs which have no very apparent connection with each other; for example, *ipecacuanha* acts on the stomach and the lungs, one organ in the abdomen, the other in the chest; if there is a relation between the drug-force of ipecacuanha and the nerve-force of the pneumogastric nerve, the junction of the stomach and lungs in the action of this medicine may be accounted for.

It may be possible to connect the action of other drugs in the same manner through the distribution of nerves; this will not be a barren speculation, for it will become a check to test the accuracy of provings, and will aid in the selection of remedies. Certain drugs may thus be found to be connected with certain nerves, and this may be the cause of *local action*.

I now beg leave to address the different sections of the profession of which I have spoken in the early part of this Essay.

To those who are content with a practice of routine, who seem to constitute the majority, and who justify their conduct by an appeal to *authority*, I have to say :---if you would observe what passes before you more carefully and reflect upon it more seriously, you would, I think, by and bye, be alarmed at the amount of mischief you have unconsciously and unintentionally done. It is not to reproach you, but to awaken you that you are asked to consider what evil has arisen, during many years, from indiscriminate bleeding and from universal purging! and more recently, from the excessive use of stimulants! what injury from calomel, blue-pill, grey-powder, and other forms of mercury dealt out to almost every patient! what mischief from steel and quinine, given for debility, without regard to the nature of the disease or the cause of the weakness! How many have been sent to a sleep from which they have never awoke by opium !

Rontine must be acknowledged to be an evil, but it may be greater or less; and if there must be a routine, the new school can offer one which is much less destructive than the old ones. Adopt this practice, and though you may often fail to do good with small doses of *aconite* and *belladonna*, you will do less harm than with large doses of *calomel* and *opium*. You may still appeal to *authority*, for you will be obeying half the precept of the Father of Medicine:—"The physician must do good to his patient, or at least *he must do no harm*."

The difficulty of avoiding useless speculation, and of being contented with accurate observation; the difficulty of enlarging experience; the difficulty of discovering what nature can do without the assistance of art, and when and how such aid can be really useful; the discouragement arising from the loss of faith in medicine among modern teachers; added to the most urgent and pressing difficuity of all—the necessity for daily, hourly *action* by a large body of medical men at the bedside of innumerable sufferers; all these difficulties have made it almost impossible to avoid falling into certain customs or routine, very varied in different hands, but each exercising a pernicious and tyrannical influence over freedom of thought and conduct.

But I would fain hope that a growing sense of the responsibilities of professional life, notwithstanding all these impediments, will diminish, day by day, this numerous class, until the individuals composing it have passed over, one by one, to join those who do their best to exert the intelligence and to improve the opportunities which have fallen to their lot.

To the Dogmatists, (I use this term in its original and good meaning, not in its modern and condemnatory one,) who respect *reason* and insist with great propriety upon its exercise, and who are earnestly searching after a theory of medicine, I respectfully say:—Nothing secular can be more valuable than a true theory of medicine, and all who

seek it deserve to be commended. But the fact that the search has been continued for more than two thousand years without success suggests that the method of search is wrong, and that some other method should be attempted. Hitherto hypotheses have succeeded each other, and have disappeared because they have been schemes invented first, and then facts having no relation to each other have been gathered together to support them. The schemes have been like spiders' webs, and the facts like so many flies entangled in them.

But the object of a thoughtful physician should be to discover, not to invent; to find out something, not to create it; to ask what the cases he sees teach, not what they may be made to prove.

It should be his endeavour, by patiently observing the natural phenomena of disease, to discover the laws by which God is pleased to govern them; not to imagine hypotheses and then to compel the phenomena to prove his guesses to be true.

He should be fully persuaded that observation and induction are true guides, and be content to abide within their boundaries. He should limit hypotheses to their proper use, for they have a sphere of usefulness, which is to suggest new observations and new experiments which may lead to the discovery of new truths.

I shall rejoice if I can persuade the intelligent minds I am now addressing, to reflect that the system of medicine which they are urged to investigate is a subject to be decided, not by argument, but by evidence; and to remember that prejudice sometimes blinds even wise men, so that they cannot see that the earth moves, and sometimes makes them so wilful that they will rather deny the existence of Jupiter's moons, than look through a telescope to see them.

Homœopathy may not be the final expression of a true medical theory, but it is the best approach to it which has yet been made. This should be enough to charm a dogmatist, and to induce him to dismiss all the hypotheses

of the schools; in the language of LORD BACON, to throw away the idols of the theatre, and to embrace, with a thankful heart, what is a matter of observation, induction, and common sense.

To the dogmatists, therefore, I offer a *theory* of medicine.

To the Empirics, (and I use this word also in its good meaning, that in which Dr. STOKES uses it,) I have to say:—*Experience* is indeed good, in truth there is nothing good in medicine which is not founded upon experience; but you will own that the experience hitherto accumulated is meagre and defective. Now, in the new school, though the time is yet so short, there are facts and experience already collected enough to delight any empiric. It was well named by HAHNEMANN, when the work was new in his hand and fresh before his mind, "the medicine of experience."

Every proving of a drug upon the healthy, and every case of disease treated by a drug in accordance with the proving of it, adds to this experience; the sum is accumulating every day. Five years of active practice after this method will give a medical man more positive knowledge in his profession than fifty did before.

To the empirics, therefore, I offer experience.

To the Sceptics, whose uppermost thought is reliance upon nature, and who, along with the homœopathists, have done good in diminishing the violence and destructiveness of "active treatment," I have to say:—While trusting to nature you perform half your duty, but only half. Assuredly, a patient should not die and it be reported that "all has been done for him that could be done," when art has done nothing.

You must not forget that the physician's art as much binds him to assist nature, as it forbids him to embarrass and hinder her. His reward is to be found in the satisfaction of having done positive good, and not only in the cold comfort of having done no harm. The only scepticism which we can afford to cherish is that reluctance to trust remedies which may be false, which springs from believing firmly that God has provided remedies which are true.

Embrace homœopathy, and your dependence upon natural efforts at recovery will still have the fullest opportunity of being justified, consistent with the faithful discharge of your duty as physicians. This duty comprises not only "la medicine expectante," but also all the succour which can be safely rendered to your patient by art.

To the sceptics, therefore, I offer, to the utmost extent lawful, the vis medicatrix naturæ.

To the Philosophers I beg to say:—Everything is beautiful in its season and in its place, and science is no exception. When its various branches are restricted to their own domains it is excellent. The stars for astronomy, and machinery for mechanical science; but it is not good to look to one branch of science for help in the province of another. For example, chemistry can tcach us a good deal about the chemical changes which take place in animal life, both in health and in disease; but it is a mistake to suppose that it can ever teach a therapeutic law. You expect too much from the collateral departments, and you are thus led to neglect the study of medicine as an independent science.

You are now taking up HAHNEMANN'S work, the proving of drugs in health, or experiments to ascertain the physiological action of medicines. This is a noble work, but you are engaging in it without acknowledging his example, and consequently without profiting by his labours, and by those of many others who have already followed him in this line of investigation.

Moreover, you are pursuing this good work in a wrong direction; you propose to make your experiments on dogs, which you consider the best adapted for the purpose.

Poor creatures! what intimate connection you have traced between the human species and the canine, which gives them this special adaptation, does not appear. A favourite hypothesis of our day would rather suggest apes as standing in the nearest relationship.*

These experiments, if carried out, will be a gigantic failure; and the sooner your attention is directed into the only useful channel—the investigation of the action of drugs upon yourselves—the better will it be for the sick.

I must not shrink from calling your attention to another defect which operates as a bar to the success of your school. You suffer your horizon to be limited by considerations of orthodoxy, of position, of etiquette. The end you profess to aim at, and I believe sincerely aim at, will never be attained as long as information from any quarter is ignored or rejected.

"It is the work of a philosopher," says the Spectator, "to be every day subduing his passions and laying aside his prejudices." † Vindicate your claim to the title by overcoming whatever evil influences have hitherto withheld you from entering upon an investigation of homœopathy. The study of nature admits of no artificial or social restraints; those who pursue it must breathe a pure air, they must walk with unfettered feet, they must work with untied hands, they must be neither respecters nor contemners of persons, and they must be free from the trammels of station. When this study is thus reverently approached, the God of nature will own the labour and crown it with success.

† Spectator, No. 564.

It will have been observed that throughout these Essays I have resolutely abstained from speculation, and have devoted my attention to a dry narration of facts. Let me urge you to consider this series of facts and the evidence upon which their credibility rests, and to go in search of similar facts, and I feel assured you will not be disappointed.

To the philosophers, therefore, I offer a scientific basis of medicine.

I have now the pleasure of addressing the Homœopathists:—With very few exceptions, you have been educated in the old school, and most of you have worked after the fashion of your fathers. You have thought it your duty to examine and to test HAHNEMANN's doctrine and practice, and in an independent, not in a slavish manner, you have adopted it. You have claimed the liberty which is due to honesty of purpose and independency of thought. I am sure you will accord me the same liberty, and will listen to me while I briefly recapitulate the results at which, up to the present time, I have arrived.

I have departed from the ordinary practice :---

By the rejection of what are technically called the *indications*; such as to evacuate and lower, or to stimulate and build up.

By the rejection of the *intentions* with which remedies are prescribed; as to produce vomiting, purging, sweating, &c.

By the rejection of *counter-irritation*; as blisters, setons, cauteries, &c.

By the rejection of *compound prescriptions*, and also of poisonous doses and other violent measures.

At the same time I have not thought it unbecoming to modify HAHNEMANN's doctrine and practice :---

By separating the *principle* from the infinitesimal dose.

By limiting the principle to *drugs*, to the exclusion of all other applications of it.

By preferring the view of *local* to that of general action.

By directing attention to the *organs* which are the seat of the symptoms, as well as to the symptoms themselves; and this both in the proving of drugs in health, and in administering them as remedies in disease. No man's brain is large enough to contain the memory of the symptoms.

By recommending the study of the action of drugs on the *component parts* of an organ.

And by pointing out the necessity which exists for proving the more powerful drugs in *different doses*.

To the homeopathists, therefore, I respectfully offer this modification of HAHNEMANN's system, and have called it Organopathy.

To conclude. If any one will do me the honour to read attentively this and former Essays, and will test each statement, step by step, in his own practice, I think he will come to a succession of conclusions similar to mine. He will observe that there has been no going back; change in a certain sense there must be, for he that moves must change; progress implies change, but it does not imply turning back; from Essay to Essay there is progress. I therefore commend these exercises to the attention of my professional brethren, and press upon them the duty of engaging in similar researches.

In this Essay I have spoken of the *routinists*, and have admitted that respect for authority is good, but have contended that the abuse of it renders their practice mischievous and unworthy of men of education; and I have appealed to them to shake off their indolence and rouse themselves to partake in the pleasure of observing and in the privilege of thinking.

I have spoken of the *dogmatists*, and have acknowledged that the exercise of reason is good and that a theory is necessary, for if men cannot discover they will speculate; but I have reminded them that medical systems, for many centuries, have been mistaken and ephemeral, and have appealed to them to examine practically the doctrine of the new school as a sound basis for a theory of medicine.

I have spoken of the *empirics*, and have granted that experience is good; but they know that their experience is defective, and in the language of HIPPOCRATES, "deceitful;" and I have appealed to them to observe and to make use of the many facts which the new school has already collected, and above all to take hold of the guide to the discovery of many more which this school possesses.

I have spoken of the *sceptics*, and have shown that reliance upon nature is good; but that their confidence in it is excessive, and that reliance upon nature is not sufficient to meet the requirements of their office; and I have appealed to them to turn their attention to the practice of a school which relies upon nature without ignoring the powers of art.

I have spoken of the *philosophers*, and, while freely admitting the utility of the collateral sciences to medicine, I have endeavoured to convince these practitioners that they are pursuing bye-paths instead of the one which lies straight before them; and I have appealed to them to keep each science within its proper bounds. I have also entreated them to break off the chains in which they are bound by the fear of losing their social position.

I have spoken of the homeopathists, and have contended that they have the advantage over their fellow-physicians, because they have entered upon a path and have laid hold upon a guide which, if they loyally follow it, will lead them more and more into medical truth. But I have warned them, lest, from an undue regard to authority, they follow HAHNEMANN instead of truth, and so fall into routine and lose their pre-eminence. I have shown how reason, and experience, and reliance on nature, and the collateral sciences, how all these contribute to the im-

provement of their method, to the advancement of their cause, and to the strengthening of their claim upon the confidence of the world.

I desire to take a bright view of the future, and to believe that the integrity and conscientiousness of the profession will prove equal to the occasion. I trust that, under the influence of a sense of duty, medical men will throw away their prejudices and exercise the self-denial which is demanded of them. I am bound to say that the effort required of them is a mighty and a painful one, and the sacrifice they will have to make is greater than some will know how to bear; so that, if they do adopt the proposed change, it will be a great and lasting honour. In this manner the unity of the profession will not only be restored, it will become more real than it ever was; the position of the profession towards the public will be put right; and all will rejoice to find that though homeopathy made a great rent, and kindled a flame of enmity, the rent has not been to the foundation, and the flame has died out.

But should this not happen, we may expect that the public will take the matter into their own hands. They will become conscious that a small number of their medical advisers have been fighting a battle on their behalf, and that the final victory depends upon themselves. They will see that the struggle has been in the interests of the public, and not in those of the profession. To be cured more quickly than before must be more to the advantage of patients than of doctors. This is common sense. And those who have received the benefit will feel that it is incumbent upon them to be firm in the support of the system through which they have received it; to have courage to own it: and to have courage to abide by it in the hour of doubt and fear. When the laity are true to themselves the profession must yield.



