Pathology, founded on the natural system of anatomy and physiology : a philosophical sketch, in which the natural classification of diseases, and the distinction between morbid and curative symptoms, afforded by pain or its absence, are pointed out, as well as the errors of homoeopathy and other hypotheses / by Alexander Walker.

PATHOLOGY,

FOUNDED ON THE

NATURAL SYSTEM OF ANATOMY AND PHYSIOLOGY.

PATHOLOGY,

FOUNDED ON THE

NATURAL SYSTEM OF ANATOMY AND PHYSIOLOGY;

A PHILOSOPHICAL SKETCH,

IN WHICH

THE NATURAL CLASSIFICATION OF DISEASES, AND THE DISTINCTION BETWEEN MORBID AND CURATIVE SYMPTOMS, AFFORDED BY PAIN OR ITS ABSENCE, ARE POINTED OUT; AS WELL AS THE ERRORS OF HOMŒOPATHY AND OTHER HYPOTHESES.

BY ALEXANDER WALKER.

SECOND EDITION.

LONDON:
JOHN CHURCHILL, PRINCES STREET, SOHO.
1841.

LONDON:
PRINTED BY STEWART AND MURRAY,
OLD BAILEY.

DEDICATION.

TO THE

MEMBERS OF THE MEDICAL PROFESSION.

GENTLEMEN,

THE sciences being valuable in proportion as they regard man, the anthropological sciences are of course the most valuable of all; and, as YOU possess this highest species of knowledge, while, versed in cerebral anatomy and mental physiology, you are best able to judge in all that most deeply interests humanity, (though therein you have sometimes suffered ignorant babblers of other professions to assume that prerogative), it is with profound respect that I lay before you this little work.

My presuming to do this will, I trust, be

vindicated by its presenting some evidence that I have thought for myself, and have not impertinently troubled you. It also appeared to me, that there already existed no systematic view of Pathology — none in which all its greater parts were sketched, however briefly, in the order of their natural relations and dependence, from Anatomy to Therapeutics. I ventured, therefore, upon this task, though with fear and trembling — for I knew the power of the minds whom a false step might array against me; —amidst hopes and fears, I alternately abandoned and resumed it; — until at length the sketch seemed to me to present the parts and the unity which were most essential.

Having finally committed the work to the press, I shall rejoice if the brief analysis which it contains should, in your opinion, throw any light on the nature of disease, and should show the truth and the precise, as well as distinct, application of THE TWO GREAT AND FUNDAMENTAL LAWS OF MEDICINE. My utmost desires would be gratified, if it should appear to you that, by its simplicity and clearness, such a system is calculated to facili-

tate medical practice — since *it asks of the practitioner only to distinguish between morbid and curative symptoms*, while, *in the presence or the absence of pain, it presents to him the simplest criterion for doing so.*

ALEXANDER WALKER.

ADVERTISEMENT.

In this attempt to sketch the outlines of a natural system of Pathology, a reason must be assigned for occupying so much space with homœopathy, discredited as it has been by its neglect of all rational bases, as well as by ludicrous mysticism.

Of the two great Hippocratic laws, one, "Contraria contrariis curentur," has been universally acted upon, while the other, "Similia similibus curentur," has been very generally neglected. The latter had even been almost forgotten as a Hippocratic law, and was, on its more recent enunciation, imagined to be a discovery of Hahnemann's! As, however, both these laws are essential to rational therapeutics, and as homœopathy has lately pretended to base itself exclusively upon the neglected law (loading it, however, with error, extravagance and absurdity), homœopathy presents itself both as an inevitable subject of comment, and as capable, *even by its errors*, of

suggesting most of the bearings of an immense pathological question.*

In the year 1836, the views contained in this work were, by letters, extensively circulated both in this country and on the continent. Its First Edition was printed in the month of September, 1837, at the same Office as the present,—and, though never published, the proof-sheets of it were distributed among the friends of both doctrines—the regular and the Hahnemannic—in order to receive and reply to the objections of both, "to *rationalize* Hahnemannism if possible," and to reconcile the two doctrines in some of their most important points. The regular practitioner, however, so much despised the mysticism and quackery of Hahnemannism, and the Hahnemannist was so shocked at the want of homage with which his idol was treated, that the task of the author soon became a very thankless one, and the work was, for four years, entirely abandoned.

Hearing, however, that the work had been borrowed from, without acknowledgment, both in France and in England, the author determined on publishing a Second Edition of it.

* Independently of this consideration, *reformed* homœopathy, repudiating unreasoned and mystical Hahnemannism, has in reality intrinsic claims of a higher kind to notice, and necessarily enters into any view of Pathology.

PREFACE.

In this little work, the author believes that he will be acknowledged to have written with perfect impartiality, equally advocating all systems when right.

The following is a list of some of the new observations which he conceives himself to have made.

He has—

Given the natural arrangement of anatomy, physiology, pathology, and materia medica;

More accurately analyzed some fundamental principles, as to the causes, nature, and symptoms of disease;

Shown that past hypotheses of the nature of disease have been founded upon partial views of the functions;

Proved that diseases present to us deranged organism and function, and an effort of nature to cure these;

Distinguished symptoms into morbid and curative, directly opposed to each other;

Proved that the distinction between morbid and

curative symptoms is essential to all scientific practice, and that, after collecting the symptoms, the first object is to distinguish the morbid from the curative ones;

Shown that the art of medicine consists in the management of both kinds of symptoms — opposing the former and assisting the latter;

Proved that the law "contraria" is the guide for the treatment of morbid symptoms, to which no other law is applicable;

Shown that minute doses are inapplicable in acting according to this law; or that morbid symptoms require proportionally larger doses;

Proved that the law "similia" is the guide for the treatment of curative symptoms, or assisting the efforts of nature;

Explained the efficacy of homœopathic medicines and of minute doses—as being in harmony with and coming in aid of the curative symptoms;

Proved that pain distinguishes the morbid from the curative symptoms; explained its cause and nature; shown that it precedes and causes the curative symptoms, by inducing slight injection or incipient inflammation of parts; and that the latter is the instrument of the vis medicatrix naturæ;

Shown how far both parties, regular and homœopathist, are right, and how far wrong;

Established the truth and the precise and definite application of the two great laws;

Shown the necessity of their union and application in a natural system.

Such points, as well as many facts and reasonings of other writers necessarily referred to, must in most cases, be but briefly touched in so small a work as the present, which is intended rather as a suggestive outline of the author's views than as a formal development of any of them.

CONTENTS.

PRELIMINARY OBSERVATIONS.

"La science qui instruit et la médicine qui guérit sont fort bonnes sans doute; mais la science qui trompe et la médicine qui tue sont mauvaises. Apprenez-nous donc à les distinguer!"

ROUSSEAU.

THAT a mere anatomist and physiologist should venture to offer some suggestions on pathology and medicine, will not surprise those who know what philosophers and physicians have said, and continue to say, respecting the state of medicine.

The observations of Bacon are, probably, as applicable to that art at this moment, as when first written. "We see," said he, "the weakness and credulity of men is such, as they will often prefer a mountebank or witch, before a learned physician, and, therefore, the poets were clear-sighted in discerning this extreme folly, when they made Æsculapius and Circe, brother and sister, both children of the Sun. For, in all times, in the opinion of the multitude, witches, and old women, and impostors

have had a competition with physicians."—But, for this, Bacon, in another place, assigned a sufficient reason. "Medicine," he said, "is a science which hath been more professed than laboured, and yet more laboured than advanced, this labour having been, in my judgment, rather in circle than in progression. For I find much iteration, but small addition."

This profession without labour, this labour without advancement, this iteration without addition, were, I imagine, the real and sufficient cause of the poetical fiction which made Æsculapius and Circe, brother and sister, and of the uniform practice of the world in placing witches, old women and impostors in competition with physicians.—And again, with perhaps equal justice, he said, "In the inquiry of diseases, they do abandon the cures of many, some as, in their nature, incurable, and others as past the period of cure; so that Sylla and the triumvirs never proscribed so many men to die, as they do by their ignorant edicts, whereof numbers do escape with more difficulty than they did in the Roman proscriptions."

Sydenham remarked that, "That which is called medicine is indeed rather the art of prating and telling stories, than the art of healing."

Dr. Heberden said, "The practice of physic has been more improved by the casual experiments of illiterate nations, and the rash ones of vagabond

quacks, than by all the reasoning of all the once celebrated professors of it, and the theoretic teachers in the several schools of Europe; very few of whom have furnished us with one new medicine, or have taught us better to use our old ones, or have in any one instance at all improved the art of curing disease."

Dr. Buchan has remarked, that "very few of the valuable discoveries in medicine have been made by physicians: they have, in general, been either the effect of chance or of necessity, and have been always opposed by the faculty, till every one else was convinced of their importance."

"The more," says Dr. Dickson, "that you explain and make easy the principles of any science, the more that science is found to approach perfection. The true philosopher has always studied to simplify the apparently wonderful—the schools, on the contrary, have as invariably endeavoured to perplex, and make the most simple things difficult of access. Any exposition of the simplicity which pervades a particular science, will be sure to meet the censure of schools and colleges; nor will their disciples always forgive you for making that easy which they themselves, after years of study, have declared to be incomprehensible!"

Too many instances may be given in illustration of this perverse opposition to improvement.

"Contemporaries," says Dr. Southwood Smith,

"are seldom grateful to discoverers. More than one instance is on record in which a man has injured his fortune and lost his happiness through the elucidation and establishment of a truth which has given him immortality. It may be that there are physical truths yet to be brought to light, to say nothing of new applications of old truths, which, if they could be announced and demonstrated to-day, would be the ruin of the discoverer. It is certain that there are moral truths to be discovered, expounded, and enforced, which, if any man had now penetration enough to see them, and courage enough to express them, would cause him to be regarded by the present generation with horror and detestation.

"Perhaps, during those eight years of re-examination, the discoverer of the circulation sometimes endeavoured in imagination to trace the effect which the stupendous fact at the knowledge of which he had arrived, would have on the progress of his favourite science; and, it may be, the hope and the expectation occasionally arose that the inestimable benefit he was about to confer on his fellow-men, would secure to him some portion of their esteem and confidence.—What must have been his disappointment when he found, after the publication of his tract, that the little practice he had had as a physician, by degrees fell off. He was too speculative, too theoretical, not practical.

"Such was the view taken even by his friends.

His enemies saw, in his tract, nothing but indications of a presumptuous mind that dared to call in question the revered authority of the ancients; and some of them saw, moreover, indications of a malignant mind, that conceived and defended doctrines which, if not checked, would undermine the very foundations of morality and religion.

"When the evidence of the truth became irresistible, then these persons suddenly turned round and said, that it was all known before, and that the sole merit of this vaunted discoverer consisted in having circulated the circulation. The pun was not fatal to the future fame of this truly great man, nor even to the gradual though slow return of the public confidence even during his own time; for he lived to attain the summit of reputation."

A remarkable, although infinitely less important instance of the same kind of opposition to truth occurred in 1693, when Dr. Groenvelt was committed to Newgate, by warrant of the president of the College of Physicians, for administering cantharides internally—a practice now universal.

Nor ought we to forget that Lady M. W. Montague, in one of her letters from Adrianople, speaking of small-pox inoculation, expresses herself as follows: —"I am patriot enough to take pains to bring this useful invention into fashion in England; and I should not fail to write to some of our doctors very particularly about it, if I knew any one of them

that I thought had virtue enough to destroy such a considerable branch of his revenue for the good of mankind. But that distemper is too beneficial to them, not to expose to all their resentment, the hardy wight that should undertake to put an end to it."

That she did not judge too severely of the profession of her day, may be seen in Lord Wharncliffe's Anecdotes of her Life.—"Lady Mary," he says, "protested, that in the four or five years immediately succeeding her arrival at home, she seldom passed a day without repenting of her patriotic undertaking; and she vowed that she never would have attempted it, if she had foreseen the vexation, the persecution, and even the obloquy it brought upon her. The clamours raised against the practice, and of course, against her, were beyond belief. The faculty all rose in arms to a man, foretelling failure, and the most disastrous consequences. The clergy descanted from their pulpits on the impiety of thus seeking to take events out of the hand of Providence. The common people were taught to hoot at her as an unnatural mother, who had risked the lives of her own children.

"We now read, in grave medical biography, that the discovery was instantly hailed, and the method adopted by the principal members of that profession. Very likely they left this recorded—for whenever an invention or a project—and the same may be said of persons—has made its way so well by itself as to establish a certain reputation, most people are sure to

find out that they always patronized it from the beginning; and a happy gift of forgetfulness enables many to believe their own assertion.—But what said Lady Mary of the actual fact and actual time? Why, that the four great physicians deputed by government to watch the progress of her daughter's inoculation, betrayed, not only such incredulity as to its success, but such unwillingness to have it succeed, such an evident spirit of rancour and malignity, that she never cared to leave the child alone with them one second, lest it should, in some secret way, suffer from their interference."

Descending to a later period in the progress of the art, we know that, when Jenner first promulgated his doctrine of vaccination, he was scarcely listened to by the profession. Nay, after the benefits, which his practice had conferred upon mankind, were brought to the level of the meanest capacity by demonstrative truth, there were not wanting men to oppose him with all the rancour of abuse, and the studied invective of personal malignity. The Bible was made an engine of attack! Erhmann, of Frankfort, among others, made this his chief ground of charge, attempting to prove from quotations of the prophetical parts of Scripture, and the writings of the fathers of the Church, that the vaccine was nothing less than Antichrist!*

Finally, it illustrates the consequence of this spirit

* Dr. Baron's Life of Jenner.

of hatred of innovation, to observe, with Sir Gilbert Blane, that, "in many cases, patients get well in spite of the means employed; and sometimes, when the practitioner fancies he has made a great cure, we may fairly assume the patient to have had a happy escape."

For my own part, I like better to discover errors in causes than in consequences—in generalities than in particulars. The prevailing practice of medicine sometimes acts *contrarily* to what we observe of disease; sometimes, *similarly* to it; and sometimes, *derivatively* or revulsively. Often it acts more or less at hazard; and when it thereby succeeds in discovering a medicament which generally cures, but the nature of which it does not understand, it terms such medicament appropriate or specific. In short, this practice appears in general neither to limit itself to any one great principle of procedure, nor to understand the nature and relations subsisting between two of these principles, as will, I think, be seen in the sequel.

Oddly enough, in some fevers, &c., this practice with apparent intelligence, *first* acts contrarily, and *then* similarly, in conformity, as will be shown, with successive symptoms, and it succeeds thereby in doing all that perhaps can ever be done in such formidable diseases; yet it apparently sees not that a similar succession of symptoms may be observed, and more or less analogous treatment may be applied, in

a vast number of diseases, and that most of the want of success in practice is due to the failure of distinguishing the morbid and curative symptoms which this implies.—But I anticipate.

To recur to the opinions of practitioners.—Numerous other quotations of similar tendency might be made from the works of physicians. What must be the state of the art, of which the professors themselves make such acknowledgments? What must the enlightened part of the public think of it?

Hitherto I have been speaking of the received doctrine; but of the opposite one, that called homœopathic, still less that is favourable can be said. I need here only remark, that the central congress of German homœopathic physicians, including nearly all the educated—those now called the new or reformed homœopathists, have, in a Declaration published by them, acknowledged the general belief that —"the founder of homœopathy had, for his object, to establish a doctrine which does not require scientific studies!"

The following sentence, which I extract from the Organon of Hahnemann, shows this belief to be well founded.—"In short, the ensemble of the symptoms must be the principal, *nay more, the sole* object of the physician, which he has to know in each case of disease, and by his art to improve, by which he cures and changes into health."*

* "So muss, mit einem Worte, die Gesammtheit der Symptome für

Many examples of similar language could be quoted from the same work.

The congress wisely object to this—that, "on one hand, diseases very similar may manifest themselves by very analogous symptoms; but, on the other hand, groups of symptoms which at first sight appear very similar, may be the reflection of very different diseases."

They add—"the writings of Hahnemann are not, and cannot any longer be, the expression of the actual state of homœopathy, either in a theoretical, or in a practical respect."*

Thus are both of these doctrines, the received one and the homœopathic, in greater or less degree, condemned by those who are most intimately connected with them. Other doctrines are perhaps less worthy of any preliminary notice.

den Heilkünstler das Hauptsächlichste, *ja Einzige* seyn, was er an jedem Krankheitsfalle zu erkennen und durch seine Kunst hinwegzunehmen hat, damit er geheilt und in Gesundheit verwandelt werde."

* Les écrites de Hahnemann ne sont plus et ne peuvent plus être l' expression de l' état actuel de l' homœopathie, ni sous le rapport théorique ni sous le rapport pratique.

SECTION I.

SKETCH OF THE NATURAL SYSTEM OF ANATOMY, PHYSIOLOGY AND PATHOLOGY — THE BASIS OF SCIENTIFC MEDICINE.

> "These sciences are always taught imperfectly, as the foundations of medicine. Their parts present no classification; their whole, no system. Their general application is consequently impossible."

No system of medicine can possess either truth or value, which is not founded on the natural basis, and does not strictly correspond to that basis in every one of its parts. Anatomy is the natural, the only, basis of rational medicine: the one strict and true classification which it affords of the organs, can alone apply to the functions in physiology; and that classification of the functions can alone apply to their derangements in pathology. Natural classification of organs, functions and derangements, demands and expresses a profound and perfect knowledge of their relations to each other; and these relations are

the only safe guides in all reasoning respecting them. Hitherto, the value of natural classification has not even been thought of in anatomy, and hence all the incongruities to be found in works on physiology, and all the absurdities in those on pathology.

ANATOMY, according to my method,* consists of three parts: namely, that which regards the locomotive organs, that which regards the vital or nutritive organs, and that which regards the mental or thinking organs.

Under the locomotive organs, I class, first, the bones, which support the body and its parts; second, the ligaments, which connect the bones together and form the joints; and, third, the muscles or bundles of red flesh, which move these;—together forming an apparatus of *levers*, which exercise large and *conspicuous motion*, and of which the *limbs* are chiefly composed.

Under the vital or nutritive organs, I class, first, the lacteals, fine tubular vessels which absorb nutritious matter from the food taken into the intestines, and carry it towards the heart, to be converted into blood; second, the blood-vessels, which circulate the blood thus formed; and third, the glands and other parts which secrete or deposit not only the substances composing the organs, but the various animal products;—all of these organs consisting of

* Published in "Preliminary Lectures," Edinburgh, 1808, and elsewhere, with exposition of the errors of Bichat, Richerand, &c.

tubes, which exercise only a minute peristaltic or *pulsating motion*, and of which the *trunk* of the body is the centre and principal seat.*

Under the mental or thinking organs, I class, first, the organs of sense, the eye, ear, &c., which receive impressions from external bodies; second, the brain, which perceives, compares, reflects, &c.; and, third, the cerebel or little brain situated below the back part of the greater brain and above the neck, which wills and consequently throws the muscles into those actions which fulfil its purposes;—all these organs consisting of *tubules* and *fibres* in which *no motion* is *visible*, and which chiefly occupy the *head*.

In order to arrange animal PHYSIOLOGY, it is only necessary to substitute the term "functions" for "organs."

Thus, the functions also are divided into locomotive, vital or nutritive, and mental or thinking.

The locomotive functions are subdivided into the function of support, that of connection, and that of locomotion.

The vital or nutritive functions are divided into the function of absorption, that of circulation, and that of secretion.

* The digestive, respiratory, and generative organs, belong to this system, as *preparing*, *renovating*, and *propagating* vital matter. These have every one of the characters of vital organs; and it was consequently an error of the arrangements of Bichat, Richerand, &c., to consider any of these as distinct systems.

The mental or thinking functions are divided into the function of sensation, that of perception, &c. and that of volition.

It is by the last of these that the nervous system acts upon the muscular system; and there is every reason to believe that the ganglionic nervous apparatus is as necessary to vital action as the cerebro-spinal apparatus is to locomotion.

In order to arrange PATHOLOGY, for the term "healthy functions," the subjects of physiology, it is only necessary to substitute the term "diseased functions."

The classes of disease are, therefore, like those of anatomy and physiology, three: namely, diseases of the locomotive functions, diseases of the vital or nutritive functions, and diseases of the mental or thinking functions.

The orders of the first class, as affecting the functions of the bones, the ligaments, and the muscles, are three, viz. diseases of support, diseases of connection, and diseases of motion.

Those of the second class, as affecting the functions of the absorbent, circulating, and secreting vessels, are likewise three, viz. diseases of absorption, diseases of circulation, and diseases of secretion.

Those of the third class, as affecting the functions of the organs of sense, of the brain, and of the cerebel, are also three, viz. diseases of sensation, diseases of perception, and diseases of volition.

NATURAL ARRANGEMENT OF ORGANS.

Class I. Locomotive Organs.			Class II. Vital Organs.			Class III. Mental Organs.		
Order I. Bones, or Organs of Support.	*Order* II. Ligaments, or Organs of Connection.	*Order* III. Muscles, or Organs of Motion.	*Order* I. Lymphatics, &c. or Organs of Absorption.	*Order* II. Arteries, &c. or Organs of Circulation.	*Order* III. Glands, &c. or Organs of Secretion.	*Order* I. Eye, Ear, &c. or Organs of Sensation.	*Order* II. Cerebrum, or Organ of Perception, &c.	*Order* III. Cerebel, or Organ of Volition.
			Organs of Digestion.	Veins. *Organs of Respiration.* Arteries.	*Organs of Generation.*			

NATURAL ARRANGEMENT OF FUNCTIONS.

Class I. Locomotive Functions.			Class II. Vital Functions.			Class III. Mental Functions.		
Order I. Function of Support.	*Order* II. Function of Connection.	*Order* III. Function of Motion.	*Order* I. Function of Absorption.	*Order* II. Function of Circulation.	*Order* III. Function of Secretion.	*Order* I. Function of Sensation.	*Order* II. Function of Perception, &c.	*Order* III. Function of Volition.
			Function of Digestion.	Passage of Blood to Lungs. *Function of Respiration.* Passage of Blood from Lungs.	*Function of Generation.*			

NATURAL ARRANGEMENT OF DISEASES.

Class I. Diseases of the Locomotive Functions.			Class II. Diseases of the Vital Functions.			Class III. Diseases of the Mental Functions.		
Order I. Diseases of Support.	*Order* II. Diseases of Connection.	*Order* III. Diseases of Motion.	*Order* I. Diseases of Absorption.	*Order* II. Diseases of Circulation.	*Order* III. Diseases of Secretion.	*Order* I. Diseases of Sensation.	*Order* II. Diseases of Perception, &c.	*Order* III. Diseases of Volition.

N.B. The Genera under each order consist of Diminished, Disordered and Encreased Function; and the articles of Materia Medica hold an order precisely the reverse of the latter.

The genera, under each order, consist of diminished, disordered, and increased function.

Precisely in the same way would I class the articles of the MATERIA MEDICA; first as operating upon the locomotive, vital or nutritive, and mental or thinking functions, and their orders as above mentioned; and then as either increasing, rectifying, or diminishing their action.

The Table, on the preceding page, presents a succinct view of these sciences, and of their greater parts, according to their *natural relations*.

Thus, while anatomy is the basis of physiology, physiology, in its turn, is the basis of pathology; and the classification of one of these sciences is applicable to the rest. And thus the relations of the organs and functions to, and their dependence upon, one another, is the basis of the natural system, which I propose.

Now, if, generally considered, physiology ought thus to be founded on anatomy, and pathology upon physiology,—if physiology be merely an account of the action of those organs which anatomy describes, and pathology merely a relation of the derangement of physiological action, — then it follows, that each particular part of physiology ought also to be founded upon its corresponding part of anatomy, and each

part of pathology, upon its corresponding part of physiology.

Regarding pathology in particular, it is obvious that if disease consist in change of function, different diseases must consist either in the changes of *different* functions, or in different changes of the *same* functions;—changes of *different* functions, as being more general, forming the *orders* of disease, and different changes of the *same* function, as being a more minute division, making evidently the *genera*, which are subordinate.*

Thus, with regard to the classes or first and most general divisions of disease, *dislocation* is a disease of the locomotive functions; *scrofula*, of the vital functions; and *mania*, of the mental functions. With regard to the orders or second and less general divisions of disease, in the last of these classes, *amaurosis* is a disease of sensation; *mania*, of mental operation; and *somnambulism*, of volition. With

* In considering the natural arrangement of medical science, it will be particularly necessary to avoid substituting the term "organ" for "function." The term "diseases of organs" expresses merely the *seats* of disease, while the term "diseases of functions" expresses their *nature*. Nevertheless, reference may be made to the various organs, as it is evident that there may be disease of a vital or any function in a locomotive organ. Thus, a tumour on a bone, may be a disease of secretion, or an ulcer in a similar situation, a disease of absorption; both being orders of the class—diseases of the vital functions.—In other words, pathology must be founded on physiology, and not on anatomy.

regard to the genera or subdivisions of disease, in the second of these orders, *fatuitas* or amentia is a disease of diminished mental operation; *mania*, in its restricted sense, or dementia, of disordered mental operation; and *vigilia*, of increased mental operation.*

In this system, all the parts correctly correspond to, and beautifully flow from each other.

I may now observe that each disease, usually reckoned single, may generally be regarded as of threefold character.

In fracture, in as far as the bone is concerned, the action peculiar to it, locomotion, is affected; as the blood-vessels are interested, their action is affected; as the nerves are involved, their peculiar action is also affected.

The affection of the state and action of the vessels or nerves, however, is not, in fracture, the primary disease, but only an extension of it to other parts or other functions; or, more properly, they are new diseases, because they affect new functions, and, though dependent upon fracture, the primary disease, are in their nature, entirely different from it.

The circumstance that medical nomenclature thus expresses several successive or co-existent diseases by

* The common names of diseases are not well adapted to any mode of classification. Some of these names are derived from a cause; others, from an effect; and others still, from an accidental symptom.

one name, has been alluded to by Dr. Darwin: "One name," he says, "frequently includes more than one disease, either existing at the same time or in succession."

While the simple fracture, then, is a disease of diminished support; the inflammation caused by it, is primarily a disease of increased circulation; and the pain caused by it, a disease of disordered vital sensation.

In this way, indeed, does every surgeon, whether aware of it or not, consider these conditions, in treatment; and therefore, instead of giving any new complexity to nosology, this distinction tends to explain and simplify that complexity which ever has existed in the nature of disease. In other words, it is natural, as it merely developes the combinations of nature.

To reckon a series of occurrences, which entirely differ in their nature, consequences and mode of treatment, as one disease, may serve the purpose of common language, but is by no means suitable to the accuracy of medical science.

The classification of every disease should be derived from the particular derangement of that individual function which occasions the derangement of all the rest, and not from the derangement of all the three classes; for, as the whole of any one disease, commonly and vaguely so termed, is primarily dependent on the derangement of one function, so health is

recovered chiefly by the restoration of that function, and the mode of cure must be indicated chiefly by the name of the genus under which the disease is thus primarily ranged.

It follows that no system of the medical art can be just in its principles, and perfect in its application, which does not consider separately the derangement of the locomotive, vital and mental functions, and trace each disease to the operation of its cause, in the primary derangement.

To this general system, it may be objected that no provision has been made for diseases of digestion, of respiration, and of generation. Digestion, respiration and generation, however, are not simple, but compound functions; and every disease of them must, in reality, be a disease of the simple functions of which they consist.

Thus, digestion depends upon the muscular power of the stomach, upon the influx of gastric juice, upon the heat to which food is subjected in that cavity, &c.

Now, if it depend on the deficiency of muscular power, it is a disease of diminished motion; if, upon a deficiency of gastric juice, it is a disease of diminished secretion; and if, upon a deficiency of heat, it may be a disease of diminished circulation, &c.

Nor would it be possible, scientifically to prescribe for the patient, who might labour under it, without knowing to which of these causes the disease may be ascribed. The term "indigestion" may be of value in

common or in general language, but must be totally insufficient for the scientific physician. The term indicates little more than the *seat* of the disease, and is consequently a very insufficient guide: the ascription of the disease to a diminution of motion, or of secretion, points out the *nature* of the disease, and affords the indication of its cure.—The arrangement therefore, of these affections, according to the natural system, is essentially necessary.

Precisely the same is to be said of diseases of respiration and of generation. The present mistake respecting both of these classes of disease, arises from not tracing them to those simple functions on the derangement of which they depend.

The difficulty of distinguishing between diseases of motion and diseases of volition may be obviated by a little reflection. All the operations of the mind are attended by consciousness, and were any one of these operations obstructed, we could not be conscious of its regular performance. When, therefore, we are conscious of the proper exercise of the will, and when, at the same time, the depending muscular motions remain unperformed, the disease is one of motion and not of volition.

To the objection to all classification made by some homœopathists, with the remark, that no two diseases ever were precisely alike, I have only to answer, that though infinitely varying with the constitutions of individuals, they must still fall under one or other of

these heads of arrangement, as primarily affecting some one function, and either diminishing, disordering or increasing it.

With regard to the materia medica, or rather to external or internal applications, the correctness of my arrangement, as indicating their influence upon the different classes of organs, is equally evident.

It is long since philosophers observed that each organ is so modified, that it is not affected by the same stimuli with another. Pressure, for instance, affects the locomotive; ardent spirit, the vital; and opium, the mental system; but like the diseases which they remedy, each of these also affects other functions, though in a less direct manner than it affects that function which is its particular object, and upon which its exact place, in a systematic arrangement, ought to depend.

A first principle of the medical art, therefore, is to know the relation subsisting between the various states of the animal functions and the power of medicines, as exhibited in the preceding sketch of a natural system, and in the table attached to it.

A valuable result of this principle is, that, by merely assigning, to any disease, its place in nosology, the physician may instantly indicate the mode of cure to be adopted for it.

The preceding sketch, then, of the first principles of a natural system of pathology, is founded on the strict basis of physiology, and is, I trust, calculated

to place, in a new and more interesting point of view, the beautiful relations which subsist between all the parts of the sciences of anatomy, physiology and pathology; as well as to lay the foundation of a more rational system of the medical art.

But we have first briefly to consider the remainder of pathology, as it regards the nature and the symptoms of disease. A knowledge of these is essential to scientific medicine; and it will be seen that the neglect to analyze symptoms in particular has mainly contributed to deprive medicine of a scientific character.

SECTION II.

OF THE NATURE OF DISEASE.*

"To discover the nature of disease, has been the most enlightened, the noblest effort of the prevailing practice of medicine."

DISEASE is all such deviation from the natural state and natural action of parts, as causes suffering or inconvenience.

* Every one knows that the term "remote cause," is used to express that which alone can properly be denominated cause; and that the term "proximate cause" is improperly applied to that which is in reality an effect of the cause — the condition of the organs and functions induced by the cause, *i. e.* the nature of the disease — the subject to be considered in this section.

With regard to the remote or real cause, a few words may be added here.— In relation to the locomotive system, as in fracture, dislocation, &c., that cause is always of external application, generally transient, and thence called accidental; — in relation to the vital system, it is often of internal application, as in the case of bodies received into the stomach, intestines, &c., and therefore of some duration; —and in relation to the mental system, it is external again,

Some diseases are called accidents. But they in no way differ in their nature from other diseases. The term "accidents" applied to them is a mere abbreviation for accidental diseases. The fall of a heavy body may be the accident; its effect upon a living being — the fracture, bruise or cut, constitutes the disease; and to express its origin, it is called accident, or, more properly, accidental disease. In these diseases, the quick and palpable operation of the cause, is attended with the advantage of rendering it, and generally also the nature of the disease, perfectly evident.

This is obvious enough: but when we proceed a little further — when we enquire into the particular changes which distinguish one of the more obscure diseases from another, the task becomes more difficult.

*The Nature of Disease neither Undiscoverable nor Spiritual or Dynamic.**

"The great Haller," say some of the lovers of mystery, "observes that 'No mortal being can penetrate into the secrets of nature;'" — which deserves only this notice, that the great Haller utters great

as all ideas are ultimately derived from impressions on the organs of sense. About the real cause, therefore, there is little obscurity.—The causes of disease may be either predisposing or exciting.

* *Dynamic* (from δύναμις) implies power—the action of material bodies, and therefore expresses what is *material*; but the medical mystics will be seen to use it as synonymous with *spiritual*.

nonsense; seeing that the whole progress of science consists of penetrations into the secrets of nature!

Hahnemann, an inveterate mystic and generally an opponent of rational principles, who must be especially noticed here, has similarly erred in declaring the impossibility of discovering the nature or *essence* of disease; — this word "essence" being one of those general terms which mysticism creates and spiritualizes, and which, however quietly introduced, soon plays a great part in its dark-lantern exhibitions.

"It may easily be conceived," says Hahnemann, "that every malady presupposes some change in the interior of the human economy; but our understandings permit us to form only a *vague* and *dark* conception of this change from a view of the morbid symptoms, which are the sole guide we have to rely upon, except in cases which are purely surgical. The immediate *essence* of this internal and concealed change is *undiscoverable*, nor have we any certain means of arriving at it.

"Diseases are *not* mechanical or chemical changes of the *material* substance of the body, and do *not* depend upon a morbid *material* principle; but are solely *spiritual and dynamic* derangements of the animal economy."*

* Nicht mechanische oder chemische Veränderungen der materiellen Körpersubstanz und nicht von einem materiellen Krankheits-Stoffe abhängig — sondern bloss *geistige, dynamische* Vestimmungen des Lebens.

Using severe terms, he proceeds—"Diseases cannot, out of deference to our foolish and groundless hypotheses, cease to be (*spiritual*) *dynamic derangements* of our *spiritual* life in its mode of feeling and acting—that is to say, *immaterial changes* in our state of health."*—And, again, "The supporters of an hypothesis so gross, as that of morbid principles, ought to blush at such ignorance of *the spiritual nature of our life!*"†—It would be more reasonable to blush at psora as the cause of most diseases, and the representative of *original sin!*

It may here be noticed, as an excellent exemplification of the degree in which even well-intentioned bigots are always ready to sacrifice truth by equivocation, that the more unscientific and unphilosophical homœopathists,‡ those of the older and unreformed school, whose zeal makes amends for want of knowledge—even these men seem to be ashamed of such doctrines as this, for they generally say—"Ah! here Hahnemann means—not *exactly* spirit—something *between* matter and spirit," &c. &c. &c. But Hahnemann, a hundred times over, says "*spiritual, not material.*" And the injury done to his art by the use

* Die Krankheiten können jenen thörichten, auf Nichts gegründeten Hypothesen zu gefallen nicht aufhören, (*geistige*) *dynamische* Verstimmungen unseres *geistartigen* Lebens in Gefühlen und Thätigkeiten, das ist, *immaterielle* Verstimmungen unsers Befindens zu seyn.

† Die *geistige* Natur unseres Lebens.

‡ Homœopathy, from ὅμοιος *similar*, and πάθος *disease*, is named from the rule *similia similibus curentur*, which it adopts.

of such a term is certainly less than that which is inflicted by the deliberate shuffling which thus seeks to defend it.

I will now endeavour to point out the precise errors which these statements appear to me to involve, both in asserting the impossibility of discovering the nature or essence of disease, and in asserting it to be, not material, but immaterial and spiritual.

The assertion of the undiscoverableness of disease, is in itself a contradiction: he who asserts the impossibility of knowing, at the same time implies that he knows; for all *difficulty* of attainment is strictly *relative* to the particular *object* to be attained, and *in order to know the degree of difficulty, the object itself must be already known.* In short, the assertion that any thing never can be known, in a matter of which the assertor avows that he himself knows nothing, is nonsense.

Spiritualism removed, what, indeed, should constitute the difficulty of discovering the nature of disease? It can depend only on material circumstances; and these can be only deeper site and more minute organization than in cases already understood. Assuredly, this is no ground for a declaration of impossibility.

And here let me ask, what would be the state of science and art, if past declarations of this kind, on

the part of all who have found themselves at a loss in their researches, had deterred others from enquiry!

All analogy shows that, with the progress of a yet more minute anatomy and more searching physiology, we shall at least know much more of the nature and essence of disease, and therefore, no man has a right to assert its undiscoverableness, even if that assertion were not, as I have already observed, in itself a contradiction and an absurdity.

As to the spirituality of disease, the same mystic, Hahnemann, asserts that, "with the exception of those diseases brought on by the introduction of indigestible or hurtful substances, into the alimentary canal and other organs, and those produced by foreign bodies penetrating the skin, &c., there does not exist a single disease that can have a material principle for its cause: on the contrary, all of them are solely and always the special result of an actual and dynamic derangement in the state of health."

"Even," he says "when a material substance, applied to the skin, or introduced into a wound, has propagated disease by infection, who can prove (what has so often been affirmed in our pathogeny), that the slightest particle of this material substance penetrates into our liquids or becomes absorbed?"

But he himself proves that such material particles do produce disease, even in the very page and paragraph in which he attempts to shew that they cannot do so!

"The causes of our diseases," he contends, "cannot be material, since the least foreign material substance introduced into the blood-vessels, however mild it may appear to us, is suddenly repulsed by the vital power, as a poison; or, where this does not take place, death itself ensues."*—And is not this disease?

"Even when the smallest foreign particle," he continues, "chances to get into any of the sensitive parts, the all-pervading principle of life does not rest until it has procured its expulsion by pain, fever, suppuration, or gangrene."†—Assuredly, this is disease.

It is still more remarkable that, in his anxiety to spiritualize disease, Hahnemann has here *forgotten* that his hypothesis of antagonist disease, in explanation of the rule "similia," is founded solely upon the fact, that medicaments are taken into the body, and there produce what *he* calls disease.

Thus Hahnemann himself proves the very opposite of his assertions on this point.

With less mysticism, and clearer views, Rau, in his ninth proposition, says, "Diseases have no *essential*

* Materiell können die Ursachen unsrer Krankheiten nicht seyn, da die mindeste fremdartige materielle Substanz, sie scheine uns auch noch so mild, in unsre Blutgefässe gebracht, plötzlich, wie ein Gift, von der Lebenskraft ausgestossen wird, oder, wo diess nicht angeht, den Tod zur Folge hat.

† Selbst wenn der mindeste Splitter in unsre empfindlichen Theile geräth, so ruht das in unserm Körper allgegenwärtige Lebensprincip nicht eher, bis er durch Schmerz, Fieber, Eiterung oder Brand wieder heraus-geschafft worden ist.

existence; they are mere changes produced in the organism, which may be considered, in an ideal point of view, as the reflection of a disordered activity, and, in a real point of view, as a *material* difference;" and, in his tenth proposition, he truly and cleverly adds, "*If there existed a power independent of matter, the deviations of that power never could be corrected by medicine.*"

I have but one further remark to make on Hahnemann's spiritualization of disease.

We know that healthy function is the regular action of material organs, and we likewise know, either directly or analogically, that every phenomenon in disease is a similarly material derangement of healthy function. Nothing, therefore, can be more opposed to the spirit of modern philosophy than any attempt to account for phenomena by means of *spiritual interference;* and it is still more abhorrent to that spirit to endeavour by such wretched means, to get rid of all rational explanation.

In this country, when even the lowest classes, in their apprehension of events, consented to give up the easy explanation afforded by ghosts, science also began to relinquish its ghosts--its electrical, magnetic and other spirits. But among the Germans, at the present day, ghosts pervade all life, all legends, all poetry, and all philosophy. With their aid, our doctors would soon reach the incantations of magic, and would rival the Peeaïs or priest-doctors of the

American Indians. Some, indeed, of the more spiritually inclined, have already followed these their worthy rivals, in the adoption and practice of mesmerism, with all its contemptible antics and disgusting humbug.*

Past Hypotheses of the Nature of Disease founded upon Partial Views of the Functions.

Having thus seen that there exists no impossibility of discovering the nature of disease (of which further proofs will be given in the sequel), and that disease is not of a spiritual nature, we may now glance at some of the hypotheses respecting the nature of disease, and see how far they conform with the natural system of anatomy, physiology, and pathology; which I have shewn to be the true basis of scientific medicine.

Let us first briefly consider a few points which properly belong to the *humoral or hydraulic pathology.*

* Like all impostures, mesmerism, or animal magnetism, adopts as a basis, or engages therein, some simple facts; such as the means of throwing a susceptible and epileptic person into a disturbed sleep, by the incessant repetition of the same motion before the eyes, of which nobody will doubt who knows the effects of rocking a cradle, or looking at masses in undulating motion, &c. And upon the mutterings which are then easily excited in some patients, their pseudo-science impudently builds visions and revelations, views of the interior of living organs, &c.! It is remarkable that homœopathists have a great tendency to belief in such absurdities, and are generally grieved to hear of their exposure.

We know that unless liquids conform to the areas of vessels, they cannot be transmitted by them; and this is proved in the most palpable way by the various injections of animal vessels.—Accordingly, many physiological phenomena can be explained only by the admissibility of liquids into tubes of different calibre.

It is objected, indeed, that thinner liquids may always permeate the tubes adapted for grosser ones. —But this merely proves that they will then proportionally longer remain in, and constitute a portion of, such grosser liquids, or of the blood itself.

The blood-vessels, moreover, are often calculated, by their convolutions, to retard the blood.—As, then, the parts of the blood separate by rest, it follows that retardation must give a tendency to such separation; nor is it improbable that, according to the degree of retardation, its products differ.

It is further known that the blood itself, in the veins of the same individual, is, at different times, thin or thick, with different proportions of serum and crassamentum, and with the latter more or less cohesive.

Now, when the blood is thin, as is the case after loss of it, the serum having then probably regurgitated from secernents, and been absorbed from the cavities, while secretion is suspended, the heart operates upon a diminished weight, and the pulse is generally quickened. — It is impossible, that this

should not produce important effects. Great loss of blood appears indeed to induce increased pulsation, determination to the head, head-ache, delirium, &c.

When the blood is thick, greater effort must be required to give equal velocity to the same bulk of it; and if this exertion be not made, the circulation must be difficult and slow. — It is accordingly granted that, with this state of blood, there is commonly some disposition to disease; and also that the brain may suffer from the weight of blood in its vessels.

Dr. Pring observes that, in the instances in which he has remarked a preternatural quantity of crassamentum, the persons have generally been bled for the relief of the head, which agrees with the supposition that the weight of the blood, in this state, may disorder the functions of the brain. Vertigo and alienation, it is also observed, appear to be connected with a state of blood in which the crassamentum is preternaturally abundant.

Objecting to the hydraulic doctrine, Dr. Pring says, "In what mechanical way can it (morbific matter) produce the phenomena of pneumonia or of synochus?—What is the *modus operandi* by which the configuration of the particles of a fluid can, by mechanical agency, make the heart beat 130 instead of 70 strokes in a minute?"

This is only a striking instance of the error of seeking explanation in imaginary causes, in wrong

systems. That is here sought for in the vascular, which belongs to the nervous system. New or altered particles may certainly affect the constitution of the liquids; and that may next excite the nervous system; and the vascular or muscular motions may finally be involved, in such a manner as to produce great and palpable effects. This is exemplified in poisons.

In short, the hydraulic or humoral pathology involved the greater number of truths, and was by far the most extensively applicable of all the old doctrines. It is, however, applicable only to the tubular or vital system; and it was perhaps attempts to force a universal application of it, especially amidst imperfect knowledge, that destroyed it. Still it presents natural and true solutions of many difficulties, and it wants, so far as it will go, only a careful purification.

The hypothesis of *the determination of blood*, is closely connected with the humoral doctrine.

Determinations of blood where there is no inflammation, less affect the capillary vessels. They occur both in health and in disease,—in health, as is shown by blushing under mental influence, and by various conditions to which woman is especially liable,—and in disease, by affections of the mucous membranes and of the viscera calculated to receive much blood, as the spleen, lungs, kidneys and liver, as well as the brain.

The cause of determination appears to be local

irritation; and the circumstances favouring it are—excess in the quantity of blood, previous lesions somewhere obstructing the circulation, &c., as well as some exciting causes of disease, heat, exertion bodily or mental, &c.

Determination of blood appears to be connected with many diseased actions.—But this doctrine will not enable us to explain the origin of every disease, even in the tubular or vital system.*

That *congestion of blood*, that is, distension by a preternatural quantity, occurs in particular organs, is undeniable.—This assuredly must affect the function and the health of organs.

It is certain that *obstruction* may take place from the admission of blood into capillaries, and from accumulation of secreted liquids in secreting organs, as is seen in the biliary ducts. The repletion of any vessel must, moreover, affect contiguous ones.—The consequences of this cannot be unimportant.

The hypothesis of *spasm* is a mere blending of the hydraulic with the nervous doctrine.

The hypothesis that the origin and essence of all disease is exclusively in *the nervous system*, has assumed various forms.

The doctrine of *Brown*, which is one of these, considers man as consisting of organs possessing a

* The hypothesis that the origin of all disease is in the digestive organs, is, on the very face of it, false, as we know how much these depend on the nervous organs, the state of mind, &c.

passive excitability or predisposition to excitement, always varying in accumulation and exhaustion by the influence of stimuli, some of which are ever acting upon him. Brown, accordingly, divided diseases into two classes: the first, caused by accumulated excitability, and marked by direct debility, which he termed Sthenic; the second, produced by exhausted excitability, and marked by indirect debility, which he termed Asthenic. His treatment was, in the first case, to reduce the excitability by antiphlogistic means; and, in the second, to increase the excitability by opposite treatment.

Darwin improved the Brunonian doctrine by regarding the brain as the common source whence all other organs are supplied with what he called sensorial fluid, which he considered as a secretion, capable of exhaustion through the agency of four faculties affecting various elementary parts:—1st, The faculty of Irritability, exhausted by external stimuli, affecting simple irritable fibres; 2nd, That of Sensibility, exhausted by stimuli affecting the fibres of the organs of sense; 3d, That of Voluntarity, exhausted by stimuli affecting the fibres of those organs which obey the will; and 4th, that of Associability, exhausted by stimuli affecting organs whose acts are associated by sympathy or habit.—By these means, Darwin supposed the sensorial power to become evacuated; as, by food and rest, it becomes replenished.

Another doctrine has lately been founded exclusively on the nervous system, that namely of Dr. *Dickson*, in his work on "The Unity of Disease,"—a doctrine not merely limited to the ganglionic nervous system, but to a single accident in that system—exacerbation and remission.

As that mutation in the nervous system has not hitherto been explained by physiologists, so far as I am aware, I may here state my view of it. This is, that *Remission* and *Exacerbation* are direct affections of the nervous system, and depend on there being performed therein two different kinds of function, the sustained existence of one of which is incompatible with that of the other, and the neglect to observe which has caused all the difficulty on this particular subject; that one of these functions, the deposition of nervous matter and accumulation of nervous power, may be called internal, because it is limited to the nervous system itself; that the other may be called external, because it extends to another system—the muscular, actuates it occasionally and more or less powerfully, and is thereby occasionally exhausted by expenditure of nervous matter; that the fact of the nervous system being liable to such exhaustion and consequent inability to act, until it is again recruited by the internal function, is proved by our consciousness or internal feeling, and by all our experience; that this exhaustion occurs in such a degree as threatens even the cessation of function;

that the very nature of muscular action and this consequent exhaustion render lassitude, repose, remission inevitable, in order to the requisite internal re-accumulation and the further performance of external function; that the very terms "exhaustion" and "re-accumulation" imply limits which cannot be exceeded, and therefore they must alternate with each other, if nervous action do not cease; that the duration of such remission must depend on the degree of exhaustion and the difficulty of re-accumulation in various organs; that nervous matter being deposited during the remission, will again be brought into action under its natural excitement; that there is consequently no case of the external nervous action in which remission and re-accumulation are not evinced; that sleep affords at once an admirable illustration and a proof of this, as it is a mere remission of nervous action, and permits a deposition of nervous matter and re-accumulation of nervous power, as we distinctly feel; that, accordingly, from this inevitable alternation of internal and external function evidently spring Remission and Exacerbation, which are thereby explained; that the vital system, on the contrary, having but an internal action to perform—nutrition, in its stages of absorption, circulation, and secretion, flowing as they do into each other in uninterrupted and regular sequence —requires no remission or exacerbation; and that this fact as to the vital system confirms the view

which has been taken of their cause in the nervous system.

Such is the explanation I give of the phenomena on which Dr. Dickson has founded his medical doctrine.

"If," says he, "we analyze these various phenomena [of *health*,] we shall find them all to consist of a series of alternate actions, — actions for the fulfilment of which, various spaces of time are requisite, —some being diurnal, some returning in a greater or lesser number of hours, while others are in constant or momentary succession.

"*Disease* is a corporeal variation reducible like health, into a series of particular mutations;—mutations, in the course of which, the matter of the same body, by a simple difference in the amount of its action and temperature, occasionally alters its character and combinations.

"Let physicians," he says, "recur to the symptoms—they will find the patient laboured under a general derangement, which some call one thing, some another, but which I am perfectly contented to term loss of health: or, if my reader will not be satisfied without a medical name—Fever, aye, and Remitting; for there is no corporeal state, morbid or sane, that can be said to be constant or unremittingly fixed. If human life has been truly stated to be 'a fitful fever,' we shall not be astonished to find,

'*Intermittent fever the Type of all Disease.*'

This doctrine being founded on a single system, and on a single accident of that system—an accident which, as Dr. Dickson says, equally prevails in *health* and in *disease*, can guide neither to the distinctive knowledge, nor to the peculiarly appropriate treatment of particular diseases. That can afford no characteristic of any one disease, which is common to all, and which is even as common to health as to disease!

Thus it has been the fate of all doctrines to be founded upon partial views of the functions. Each of these hypotheses is founded on a single organic system, and that generally the vital system, and the action of its nervous apparatus, the ganglionic or great sympathetic.

The circumstance that misled pathologists so far as to imagine that all diseases could be accounted for by the deranged action of a single function, and that generally a vital function, or a function of the nerves of the vital system — the unconscious and involuntary ganglionic, was probably their seeing that that system was often the immediate subject of disease, and their indistinctly feeling it, at all other times, to be engaged in the healing efforts of nature.

While thus led to treat of the *ganglionic system*, I may observe that much which is erroneous is involved in the common doctrine of this, regarded as the great sympathetic nerve; that, in the explanation of phenomena, there is no need of assuming the mys-

terious notion of sympathy; that the ganglionic system is regulated by the same general law as the rest of the nervous system, its derangements being always referred to its extremities, or, as I deem them, its sentient origins; that there is nothing more wonderful in the ganglia or central parts of that system being insensible than there is in the brain or central part of the higher nervous system being so; that pain referred to its extremities is the expression of derangement in the ganglionic system, which has nothing to do with touch or any other sense, as it gives no cognizance of forms, &c.; that among many proofs that pain is an expression of the ganglionic system, none is more remarkable than one furnished by facial Tic Douloureux,—namely, that, while it lasts, the pain produced by it is universally acknowledged to be infinitely more severe than that caused by any disease of the fifth pair* itself, by which the seat of the disease is supplied, while the function of the fifth nerve is absolutely unaffected, and the relief in the intervals of the paroxysms is perfect; that, for the reasons assigned above, derangements of the sympathetic connected with the primæ viæ are naturally referred to its first filaments

* "Nervous pains," says Sir B. Brodie, "are more severe, and perhaps, on the whole, more common, in those parts which receive their nerves from the fifth pair, as the face, the eyes, the tongue, than in any other individual part."—If the ganglionic system is the seat of all pain, this is explained.

arising on what may be deemed the commencements of the primæ viæ, the cavities of the mouth and nose; that as these filaments there accompany the fifth pair, serving for vital sensation and involuntary motion, as Bellingeri has proved, many of the derangements of the sympathetic are referred to the branches of the fifth pair; and that hence we ascribe to them Tic Douloureux. "This view," observes Dr. Allnatt, "has certainly the advantage of simplicity, and it conforms to the rule of assigning no more causes than are sufficient to account for effects."

The brief history, then, of pathological doctrines is, that, when any one of them has been partially true, it has been expected to be universally applicable, and hence frequent disappointment, and ultimate rejection or neglect.

No wonder that Dr. Pring should say, "So unsettled is the state of pathology, that those who read, are sceptics in all its doctrines, and those who do not read, are left to the guidance of a sort of intuition, which is not always productive of happy results, but very frequently suggests, through the course of a long life, only a reiteration of the same errors."

The tabular view which I have given of the natural system, at once affords a refutation of all hypotheses founded on partial views of the functions.—There is not one of the classes or orders of functions it pre-

sents, which may not be deranged, or become the subject of disease. This will be obvious on the slightest inspection. If then, each deranged function may constitute disease, and that differing from every other, how shall the derangement of one function account for all diseases! The supposition amounts to an absurdity.

Every disease is obviously that of the system primarily affected; and to attempt to class, to characterize, or to treat it, from other functions, which it may involve, is to contemplate other diseases than the primary one—to neglect and to misunderstand the whole of them.

The Nature of Disease explained by its Symptoms, &c., in each particular Case.

Having now shown, first, that there exists no impossibility of discovering the nature of disease, and that disease is not of a spiritual nature, and secondly, that past hypotheses have been founded upon partial views of the functions—a method at once refuted by a glance at a tabular view of the natural system, it follows that it is to the symptoms of each particular disease, and the aid of profound anatomical, physiological, and pathological knowledge, that we must look, in order to discover its nature, its theory, its precise place in a natural system. To achieve this, will doubtless become, ere long, the great study of scientific physicians.

The state of the organs and functions which the real cause has induced, or in other words, the nature of the disease, is indeed perfectly known to us in many cases; with the progress of knowledge, it must be known to us in many more; and there is not the slightest foundation for a declaration of the impossibility of discovering it in any case.

In relation to the *locomotive system*, as in fracture, dislocation, &c., the separation and other mechanical accidents to parts naturally connected, and their immediate and palpable consequences, constitute the nature or essence of the disease, and no difficulty is presented as to them.

Thus, in fracture of the os femoris, for instance, the sudden inability to move the limb, preternatural mobility of one portion of the bone, occasionally a distinct crepitus when the fractured surfaces are pressed against each other, deformity of the limb, and sometimes shortening, are at once the disease, the essential nature of the disease, and its morbid symptoms; and it cannot be pretended that the discovery of them is attended even with difficulty.

Here let me remark, that neither the hypotheses of humoral pathology, determination of blood, &c., nor the neurological hypotheses have any explanatory relation to such diseases; but that a consideration of their place in a natural system, as described in the first section, at once explains their nature.

Hahnemann indeed excepts surgical diseases from

his denunciation of undiscoverableness. But medical diseases are more obscure than surgical ones, only because, while surgery in general treats the great levers of the locomotive system or palpable organization, medicine treats the minuter tubes of the vital, or scarcely perceptible fibres of the mental system, with the actions of which we are only now becoming acquainted: medicine differs from surgery only in its subjects being less palpable, and at present less understood. To except, therefore, surgical diseases from the denunciation of undiscoverableness, is merely to allow the discoverableness of what we happen long ago to have discovered.

But this knowledge of the cause and nature of diseases is not confined to injuries affecting the great levers, and palpable organization of the locomotive system.—In *the vital system*, wherever its structure is most exposed to investigation, as at what may be called its commencements in the œsophagus or trachea, the nature of various diseases is as obvious as the disease itself is easily remediable. If bodies are lodged in these parts, obstructing deglutition, or producing symptoms of suffocation, no difficulty as to the nature of the affection is presented.

In many parts, moreover, of the same system, which are more removed from observation, the internal operation is, in many cases, easily explained. Inflammation, though neither the beginning nor the termination of a morbid process, is a satisfactory example of this.

Inflammation is characterized, as we know, by heat, redness and swelling, as its principal symptoms. The capillary vessels are the proper seat of the affection. There is at first an increased velocity of blood in these vessels, and an increased quantity passes through them, by which they are gradually dilated, and to which the red colour is owing; and even when the blood seems finally to move more slowly (a circumstance connected with the enlarged diameter of the vessels—whence however it moves in greater mass), the larger surrounding arteries exert an augmented action to overcome the obstacle, as their accelerated pulsation proves. Thus far, and it is the most fundamental and important point, there is no doubt as to the nature of inflammation.

The nature of dropsy, is equally clear. "It appears to me highly probable," says Andral, "that the dropsical effusions which are generally denominated active, are simply the mechanical result of the over-distension of the vessels, which allow the serous portion of the fluid by which they are over-distended, to transude through the parietes of their capillary ramifications. In confirmation of this view of the subject, I may cite the observation, that if a large quantity of water be injected into the veins of an animal, without having first withdrawn blood from his system, serous effusions are quickly formed." —The dropsy which sometimes follows loss of blood probably depends on the water, which then relatively

abounds in the blood, running more freely through the secreting arteries. It does not, however, follow that this should be an invariable consequence in every idiosyncrasy; as, in one person, the secreting functions may be more, and in another less, impaired.

Closely connected with what has now been said of the nature of disease, is the inappreciable value—the absolute necessity, of a knowledge of morbid anatomy.

The homœopathists egregiously err in asserting that morbid anatomy can never help to demonstrate the nature of disease. It actually does so in all the cases in which we find foreign bodies to be the cause; and it will more and more do so as the art of medicine advances. There are lesions which precede and produce morbid actions, as well as others which follow them.

I conclude this section by repeating, that to discover the nature of disease, has been the most enlightened, the noblest effort of the prevailing practice of medicine;—its chief error has consisted in taking partial views of the functions,—in expecting the derangements of one system, as the tubular, and the vital nervous, systems, to account for the derangement of all,—and its failure, in so far as it has failed, is owing partly to neglect of the truth, demonstrated in the

preceding section, "that no system of the medical art can be just in its principles, and perfect in its application, which does not consider the derangement of the locomotive, the vital and the mental functions distinctly, and trace each disease to the operation of its cause, in the derangement of the particular function first affected, which led to the derangement of all the rest," and partly to the neglect to analyze the symptoms of disease, as will be shown in the following section.

I believe that attention to these two great remedies for fundamental error is alone wanted, by the prevalent medical doctrine, to realize the object of its persevering efforts,—the general discovery of the nature of diseases.

SECTION III.

OF SYMPTOMS.

There are two kinds of symptoms hitherto undistinguished, morbid and curative;—these, as their names imply, are directly opposed to each other;—and consequently, unless they are clearly distinguished, medical practice must for ever remain in a state of disgraceful empiricism.

The term Disease, is commonly used to imply, generally and vaguely, all the parts, phenomena or appearances of a morbid condition, which are discoverable by our senses. More strictly and discriminatively considered, it is an existing state, consisting of enfeebled, troubled, or excited organization, and diminished, disordered, or encreased function; and it involves a reaction of the system, called from its effects, the vis medicatrix naturæ.—It is because both this state of organization and function, and this reaction of nature have hitherto been indiscriminately included in the ill-defined term disease, that they are seldom distinguished otherwise than accidentally and

imperfectly, and that the treatment of disease is in general empirically conducted.

Disease, however, is known to us only by appearances or symptoms. These symptoms, it appears to me, are generally, if not always, of two kinds :—some which are *morbid*, and may be said properly to constitute the disease;—and others which are *curative*, the results of reaction in contiguous parts, or in other words, of the vis medicatrix naturæ.

Of this, examples shall be given. But I must first observe that reaction takes place by aid of the ganglionic nervous system, and of the vital system, because these systems possess centres, irritation extending towards which, from the circumference, easily excites an action in all the surrounding parts.

Thus, in a broken thigh-bone (where these symptoms, morbid and curative, exist nearly together), inability to move the limb, mobility of one portion of the bone, crepitus between the broken ends, deformity, and sometimes shortening—changes producing irritation and pain, are the morbid appearances or symptoms, or properly the disease ; while, excited by the irritation and pain, and existing almost at the same time, a slight injection, a degree of incipient inflammation and swelling, connected with an encreased quantity of blood in the vessels, an effusion of serum and coagulating lymph, deposition of phosphate of lime, formation of callus, &c., are the curative ap-

pearances or symptoms, the effort of nature to re-unite the fractured parts.

Thus, too, when a foreign body has slipped into the trachea, the impediment to respiration, the suffocation,—conditions producing irritation and pain, are the morbid appearances or symptoms; while the convulsive efforts caused by the irritation and pain, are the curative appearances or symptoms, the operations of the natural reaction called vis medicatrix naturæ.

Thus, also in diarrhœa, the injury caused by fright, cold and unsuitable matters in the intestinal canal, &c., and producing irritation and pain, is the morbid symptom, the disease; while the speedily following encreased peristaltic motion excited by the irritation and pain, and the forcible ejection of the contents of the canal, are the curative symptoms, the efforts of nature to dislodge the injurious matter.

Thus likewise, when a strange body has pierced the skin, its mere existence there, its rupture and separation of parts, causing irritation and pain, are the morbid symptoms; while, slight injection, incipient inflammation excited by the irritation and pain, the flow of serum, the swelling, the formation of pus, bounded by lymph thrown out around it, the bursting of the abscess, the ejection of the spine, and the gradual filling up of the cavity, partly by the surrounding parts now freed from compression, and

partly by the lymph which takes the form of granulations, are the curative symptoms.

Finally, in frost-bite or chilblains, the sedative power of cold on the capillary circulation, and the stop it puts to all vital action, are the morbid symptoms; while the gradual return of blood and of the natural heat of the parts, the results of reaction, are the curative symptoms, which, however, in this and in many other cases, sometimes require guidance and regulation in order to avert inflammation.

These are clear, and I think, decisive demonstrations of the existence of the two kinds of symptoms, morbid and curative, and their utter difference in kind.—Intermittent fever may, however, be added as a further example, because it presents these opposed symptoms, morbid and curative, in brief distinct stages, which will be seen by transcribing any common account of it, as is done below.

A febrile paroxysm, as every body knows, consists of shivering, heat and perspiration in succession.

In the cold stage, distinctly marked, there is collapse, if not constriction of the surface, especially of extreme parts, sensibility diminished, features shrunk and pale, lips livid, pulse weak and uncertain, respiration short and laborious, coldness gradually becoming insupportable, universal tremor, much weakness, great oppression at the præcordia.

Fever seems rarely to occur unpreceded by checked perspiration; and cold seems extensively necessary

to its production. The property of cold in diminishing the area of arteries is well known. To illustrate its operation on the extreme vessels, indeed, it is only necessary to contrast the obvious effects of cold and heat on the texture and colour of the skin. On this diminution, probably depends its sedative influence.

Fever, then, in its intimate nature, involves collapse and debility, at least deficient action of the capillaries, if not their constriction; and, accordingly, during this state, all the secretions from these vessels are scantier than in health. This diminished action of the capillaries precedes all encrease of the frequency and strength of the pulse, and must therefore be the cause, not the effect of febrile reaction. Indeed, this diminution of capillary action must obstruct the motion of the blood in these vessels, and must encrease the quantity returning to the heart by the larger vessels opening into the veins—an adequate cause for the affection of the heart in fever. As this, moreover, determines a larger quantity of liquids to internal parts, a local seat of inflammatory disease is a natural consequence; the particular internal organ affected being dependent on relative feebleness. I believe that, in fever, there is always congestion of the venous system, and the parts connected with it, and that the ultimate effort of nature is to remove this congestion.*

* "Congestion," says Dr. Macartney, "properly speaking, belongs to the venous system. The most remarkable circumstance, with

Such are the morbid symptoms, the cause, and the nature of the disease in its first stage.

This is confirmed by the common treatment; for while, during the whole paroxysm, the object of the practitioner is to hasten its different stages, and to relieve urgent symptoms, during the cold stage, it is, to restore the heat of the body by every means, and especially by artificial heat. Bleeding in this stage almost always cuts it short, generally stops the existing paroxysm, and often prevents its return.

After the morbid symptoms, thus forming a distinct stage, follows the hot stage, in which pains are felt in various parts; reaction is excited; the heat returns partially and irregularly, at length becoming

respect to congestion, and the one which has not hitherto been described, is, that arteries found in a congested part are smaller than their natural size. In order to ascertain the direct effect of venous congestion, on the arteries of the part concerned, I made the following experiment: I put ligatures on both the jugular veins of the rabbit; the animal died apoplectic, and upon examining the state of the vessels of the ears, I found the veins which lie towards the outer edge of the ear, greatly enlarged, and gorged with dark blood; but the artery, which runs in the centre of the ear, was reduced very much below its natural size, so that it appeared as a mere line. The result of this experiment made me wish to see what would be the instantaneous effect of arresting the venous circulation. I accordingly exposed the mesentery in a young rabbit, and having tied the trunks of several meserentic veins, their corresponding arteries contracted immediately, in the most palpable manner, and to a very small size; as if taught by their organic instinct, that blood should not be permitted to go where it must immediately return."

universal, and rising above the standard of health; the blood rushes into the previously collapsed vessels; fulness of the surface takes the place of previous shrinking; the face is flushed and swollen; the skin becomes hot and dry; the pulse acquires strength and hardness; the respiration is hurried; there is considerable pain in the head or elsewhere, and throbbing of the temples; confusion of thought, or even delirium occurs. At the same time, the tongue becomes covered with a white crust; the urine is scanty and high-coloured, and thirst prevails.

The nature of the disease in this stage is obvious; nearly every symptom depending on the reaction of the heart.

The treatment now applied is the diminution of the bed-clothes as far as seems expedient, the sponging of the extremities with water, the use of cold drinks, and the employment of all rational means to diminish the temperature. If there be symptoms of local inflammation, bleeding is employed.

In the sweating stage, the facts explain themselves. When nature has overcome some at least of the obstacles, moisture usually begins on the forehead, but soon extends over the body, its total amount being finally very great. The febrile symptoms then rapidly diminish; uneasy sensations and heat of skin abate; the pulse sinks to its natural standard; respiration becomes free; head-ache ceases; sense of weakness goes off; thirst abates; appetite returns;

the secretions become healthy, the urine depositing a lateritious sediment. Rational treatment encourages this stage until the uneasy feelings are relieved, or at least mitigated.* So long, I believe, as the venous congestion remains, the effort of nature gives but partial relief.

Hippocrates imagined this stage to be an effort of nature to throw off some noxious matter, an opinion entertained, as Dr. Gregory observes, before we knew the class of eruptive fevers, the phenomena of which afford great countenance to it.

Every properly informed person regards this vis medicatrix, not as a distinct power, but merely as an excited effort, and an excess of that common reaction against noxious agents, which has nothing suppositious in its nature, but is always imperceptibly acting, and results from the unity and common tendency of life in each individual being.

Accordingly, all modern pathologists have also seen, in this effort, an admirable instance of the vis medicatrix naturæ; and it is only strange that it should not have led them to observe the same effort in every disease, as well as the double symptoms, morbid and curative, which all diseases present, and which have been seen to be perfectly distinct in the present case.

* Sulphate of quinine, as every one knows, is given in the intervals; and laxative medicines form an essential part of the treatment.

Stahl, in an ill-expressed passage of his Pathologia Generalis, appears most nearly to have approached to an indistinct view of this. He says, "Multi insoliti actus in corpore humano contingunt quos vulgus hominum pro morbis ac directis morbidis affectionibus accusat; qui rem penitius considerando ut potius ita salutaris sint efficaciæ, ut si illi non fuerint et potiuscunque in reliqua tali constitutione non fuerint, longe adhuc majus et gravius periculum et liberior atque inde etiam promptior consecutio damnorum resultet."

Two circumstances have tended to prevent the observation of this opposition of symptoms as a universal law, namely,—first, that *the curative symptoms are very often, as the foregoing examples show, more or less detached from the morbid symptoms;*—and secondly, that *they also very often vary, being of different kinds in different cases of the same disease.* Hence they are frequently enumerated under the head of Prognosis, instead of Symptoms.

It is necessary to observe that these two kinds of symptoms, the morbid and the curative, whether coexistent or in succession, are, in every disease, directly opposed to each other, as indeed their very nature implies.

This distinction of symptoms, then, has never before, I believe, been clearly made, as universally applicable to disease; and most of the errors of language and reasoning—much involvement and confusion, both in common practice and in homœ-

opathy, appear to have arisen from overlooking it.

Owing to neglect of this distinction, the modern homœopathist, Hahnemann, says, "As we cannot see what takes place in the economy of man when in health, no more can we see what is going forward there, when health is disturbed. The action that takes place in diseases manifests itself only by external symptoms, through the medium of which alone, our system expresses the troubles that take place in the interior; so that, *in each given case, we never once discover which are those, among the symptoms, that owe their origin to the primitive action of the disease, and those which are occasioned by the reaction of the vital powers* endeavouring to rescue themselves from danger. *Both are confounded* before our eyes, and *only present to us* (reflected on the exterior) *an image of the entire malady* within."

Not contented with thus confounding the two kinds of symptoms, and deeming both of them morbid (as he will every where be seen to do), he adds, "*the fruitless efforts which nature, abandoned to herself, makes to put an end to the malady, are also sufferings* which the whole frame undergoes!!!"—Hence evidently he deems all the symptoms morbid.

Strange to tell! though this is true in desperate cases, when even nature's efforts wear out life already almost exhausted, the doctrine of homœopathy entirely rests on a diametrically opposite fact—on the

beneficent operation of the vis medicatrix naturæ—as will be proved in the sequel.

Again Hahnemann says "The invisible substance that has undergone the morbid change in the interior of the body, and the perceptible change which exhibits itself externally (the symptoms), form together, beneath the eye of an all-powerful *Creator*, that which *man* calls disease."*

An able German, who writes under the assumed name of Beauvais, and belongs to the reformed homœopathic school, similarly confounds morbid and curative symptoms, or sets all of them down as morbid, precisely as Hahnemann does, but without the mysticism which clouds the views of the latter.

Speaking of the vis medicatrix naturæ, he says, "This force assumes the form of vital functions in the normal state; but, whenever an external cause, or one engendered in the organism itself, threatens the latter with injury, it [this force] is developed and appears to us under the form of *morbid symptoms*."†

He desires to aid these morbid symptoms: he

* This *deus intersit* may have to do with religion: it has nothing to do with science. He thought perhaps of the old saying—"Tres medici, duo athei." Physicians have been always accused of being bad enough christians: perhaps because their studies oblige them to regard chiefly the body, organs, matter.

† "Cette force prend la forme de fonctions vitales dans l'état normal; mais, toutes les fois qu'une cause venue du dehors ou engendrée dans l'organisme même, menace de ravager ce dernier, elle se développe et nous apparaît sous la forme de *symptômes morbides*.

says "Those which are usually called *morbid symptoms*, those which physicians oppose by every means, are nothing else than the result of the salutary efforts of nature, ill-understood reactions, which ought not to be repressed, but which on the contrary, ought to be aided by all our power, as Hahnemann does. [! For the contrary, see the 2nd paragraph in page 60.] This proposition, that the *morbid symptoms* are efforts of reaction ill-understood, forms the basis of homœopathy."*

He deviates still further from the truth by calling for means *producing analogous reactions* — instead of simply aiding the curative symptoms — the natural reaction already existing, not the morbid symptoms. "To aid these reactions, is the business of the physician. The homœopathist does this, in making use only of means which *produce analogous reactions.* The cures which he operates are therefore the only direct ones: all others are indirect. The homœopathist cures by assisting the vis medicatrix naturæ." †

* "Ce qu'on appelle ordinairement *symptômes morbides*, ce que les médecins combattent de toutes leurs armes, n'est non plus autre chose que le résultat d'efforts salutaires de la nature, de réactions méconnues, qu'il ne faut pas réprimer, mais que, loin de là, on doit aider de tout son pouvoir, comme le fait Hahnemann! Cette proposition que les *symptômes morbides* sont des efforts réactionnaires méconnues, fait la base de l'homœopathie.

† "Aider à ces réactions, tel est le rôle du médecin. L'homœopathe seul le remplit, en ne faisant usage que de moyens qui pro-

Here morbid symptoms are throughout confounded with curative ones: all are called *morbid.* And the writer speaks of *producing* analogous reaction, whereas natural, not analogous, reaction already exists, and any other would disturb it.

The central homœopathic congress also commit an error on this head. "Homœopathists," they say, "have been reproached, without reason, for considering, according to their theory, the symptoms as the disease itself. Nothing is more false."* Now, I have already shown that the symptoms are of two kinds, morbid and curative; and certainly the morbid symptoms are only the visible portion of the very disease itself.

Are other proofs necessary to show that homœopathists both of the mystical and of the reformed school are in utter confusion as to any distinction of symptoms?

It is remarkable that this assertion, that all symptoms are morbid, is directly opposed to all homœopathic means and procedure—a point which it is of importance for me now to establish, and which compelled me to quote the preceding errors.

duisant des *réactions analogues.* Les guérisons qu'il opère sont donc seules directes; toutes les autres sont indirectes. L'homœopathe guérit en allant au secours de la force médicatrice de la nature.

* On a reproché sans raison aux homœopathes de regarder, d' après leur théorie, les symptômes comme la maladie elle même. Rien n' est plus faux.

If that which I have already said be true—that, in every disease, some symptoms are morbid, and others curative, and, if, as I shall show, the aphorism "contraria contrariis curentur" applies to the former, while the aphorism "similia similibus curentur" applies to the latter, each mode of treatment being imperfect without the other's aid, then it is evident that homœopathists ought to be able to distinguish the morbid symptoms from the curative ones;—and the power of instituting this distinction necessarily implies a knowledge of the nature of disease, which, according to their hypothesis, it is impossible to become acquainted with!

From this, it seems evident, that, in all rational practice, morbid symptoms must be distinguished from curative ones, and that, even in homœopathic practice, if that were rational—that is, in prescribing according to the law "similia," the very *first* operation after collecting the symptoms, should be clearly to distinguish the curative symptoms from the morbid ones, which seems never to have been thought of, and the *next*, to select the medicament which produces effects resembling the former, not the latter.

A moment's reflexion will show that although, in obscure cases, it is difficult to distinguish the morbid symptoms from the curative ones, homœopathy, if rational, would no more (according to its phrase) imitate the former, than, in the cure of a fractured limb, it would increase the want of support, the mo-

bility, the wrong position, the shortening, &c. or than, in the case of poisoning by an acid, it would encrease that substance, instead of its alcaline antidote.

It seems to me indeed probable, that, when the means employed by homœopathists have been tardy, or have failed, in operation,—an event far too frequent, it has been because they corresponded to more or less of the morbid, as well as to the curative symptoms. Thence probably have arisen aggravations of the disease, or of the morbid symptoms, instead of augmentations of the curative ones or the efforts of the vis medicatrix naturæ.

Thus, symptoms cannot be understood, nor can medical practice ever be rational, without understanding both the organic derangement and its two distinct series of manifestations; and therefore it is in certain medical and in many surgical diseases, where these two kinds of symptoms are easily distinguished, that medicine acts most surely and successfully.

Here I may observe that one of the most interesting aspects in which medicine can be regarded is as an art deriving from physiology principles whereby the theories of that science may be applied in the cure of diseases.

The art of medicine, then, consists in the management, not of one, but of both these kinds of symptoms,—in opposing or suppressing the morbid symptoms, and in supporting or guiding the curative

ones. Hence the two aphorisms—"contraria contrariis curentur," and "similia similibus curentur;" and hence the truth and the value of both of them, as will in next section be shown.

Before the date of the first edition of this work, and of various letters preceding it, no distinction of symptoms into morbid and curative, can, I believe, be shown in books. It has since been adopted by some homœopathists, without acknowledgment.

To the assertion that my distinction of morbid and curative symptoms, in the first edition of this work, is merely the distinction of action and reaction, I need only say, that, though action and reaction have been known in philosophy for thousands of years, no distinction between morbid and curative symptoms was, before the time above stated, mentioned in medicine; and consequently it could not be even imagined, that these undistinguished and nameless morbid and curative symptoms, were the same with action and reaction. It may, I believe, be my peculiar claim, not only to have first distinguished morbid and curative symptoms, but to have given a name to the latter.

The more contradictory assertion, that my doctrine of homœopathic cures (being effected by medicaments assisting *curative* and *not morbid* symptoms, and aiding *that identical reaction which constitutes the existing*

curative symptoms, not *producing analogous reaction*)—that this is the same with Beauvais' "assisting *morbid symptoms*" and "producing *analogous reaction*," is undeserving of any reply, if the words employed are meant to have their universally received meaning.

SECTION IV.

THE RULE FOR THE TREATMENT OF MORBID SYMPTOMS—"CONTRARIA CONTRARIIS CURENTUR."

That portion of the basis of natural and rational medicine, on which the antipathic or regular practice chiefly acts, and whence it derives its name.

HIPPOCRATES has said, in a manner the most distinct, that "contraries or opposites are the remedies for their opposites,—contraria contrariis curentur."

That aphorism is evidently true as to the remote cause and the morbid symptoms, to which moreover no other law is applicable; for even the homœopathic congress distinctly says that against the remote cause, *the ordinary remedies* are to be directed—as splints to fractures, bougies to strictures, pressure to tumours, narcotics to sleeplessness, coffee to somnolence, &c.

This rule is also implied in the injunction "tolle causam;" but it is thereby imperfectly implied; for the rule "contraria contrariis curentur," applied to the morbid symptoms, attacks these as well as the cause. Thus, in the case of a limb being broken by a heavy body lying over it, the rule "contraria"

directs not only the removal of the cause, but that of every morbid symptom, the separation or mobility of the fractured ends, &c., — in short, all that the practitioner has directly to oppose.

This law is the chief guiding principle of the common practice (where it refers to a principle), and indeed, this rule is too exclusively employed in that practice. Hence I have used the term antipathic as applied to it. It is in relation to its primary or immediate action, that its title "contraria contrariis" is vindicated.

Homœopathy indeed rejects this rule, doctrinally at least, and its practice must therefore be noticed here. "The existing morbid symptoms," says Hahnemann, "far from being effaced or destroyed by *contrary* medicinal symptoms, like those excited by the antipathic, enantiopathic or palliative methods, on the contrary appear more intense than ever, after having for a short space of time undergone apparent amendments." And again, "in the antipathic or palliative method, — the morbid symptom is to be annihilated by a medicinal symptom *opposed* to it. This cannot possibly be accomplished."

It is an error of homœopathy, however, thus doctrinally to reject the rule; for it is extensively acted upon by homœopathists, without their clearly perceiving that they do so, and that even while they deprecate it, in consequence of their not distinguish-

ing its abuse.—This, Rau in some measure perceived, when, in his twenty-second proposition he said—"The principle 'contraria contrariis' is in fact too natural to be directly rejected."

Homœopathists indeed act contrarily to the disease in the most direct way, by opposing the remote cause and the morbid symptoms.

In a case of fractured limb, they proceed upon the principle "contraria contrariis curentur," when, acting contrarily to the morbid symptom of *mobility*, they apply splints to the limb, which ensure to it the opposite state of *fixity* and rest. No one would here dream of the application of the law "similia," because it would imply a repetition of the fracture.

That that which should be the strict homœopathic treatment of disease, under the single law "similia" universally applied, is, in this and the following paragraphs, rightly represented as a repetition of the cause, is best proved by the examples which Hahnemann himself gives of the application of the law "similia," in *burns* cured by *heat*, *frost-bites* by *ice*, &c., in which the cause is repeated.

When an artery has been, by accident, wounded, and a dangerous hemorrhage ensues, the homœopathist, acting contrarily to that morbid effect, would tie up the artery and oppose the hemorrhage according to the rule "contraria;" and he would not encrease or encourage it either by the same or by analogous means according to the rule "similia."

When, without any accident, but in the progress of slower disease, aneurism of a large artery already threatens destruction, the homœopathic surgeon, in such a crisis, whatever internal remedies he may employ, would not hesitate to save the patient by acting contrarily to the cause of destruction, in performing the simple and sure operation of tying up the artery.

"In cases of poisoning," a homœopathic writer observes, "we begin by obliging the patient to throw up the noxious substance, before we contend with the effects produced by it, and we then give the antidotes," &c. Hahnemann approves "the antidotes to several poisons, such as alkalis against mineral acids, liver of sulphur against metallic poisons, coffee, camphor, and ipecacuan against poisons by opium," &c. This likewise, as the term antidote (from ἀντὶ and δοτὸς) implies, is an extensive adoption of the antipathic principle "contraria;" and no one would either administer more of these poisons, nor any new ones, however analogous, by the rule "similia."

Hahnemann says, "In urgent and dangerous cases, or in diseases that have just broken out in persons who were previously in health, such as asphyxia by lightning, suffocation, freezing, drowning, &c., it is proper, in the first instance, at least, to reanimate the feeling and irritability by the aid of palliatives, such as slight electric shocks, injections of strong coffee, stimulating odours, warmth," &c.—This acting

contrarily to the morbid state by stimulants, and, in the most direct manner, producing an opposite state, proceeds upon the law "contraria;" nor would any one encrease the morbid state, or produce an analogous state, by the rule "similia."

In his fifty-ninth proposition, Rau even says—"The salutary effect obtained by means of *antipathic remedies* in asphyxias, ought to encourage us to administer them in other analogous cases, *in preference to homœopathic remedies*, in order to provoke at first a reaction." Nothing can be more decisive than this is of the truth I seek here to establish.

Finally, Hahnemann, in the most general manner, states, "that every intelligent physician will *first* remove this (the occasional cause), is evident to himself: then the disease usually ceases of itself."*

Similarly, the central congress says—"In all cases in which the remote cause continues to act, we, as well as the physicians of the old school, regard, as the *first indication* the making it to cease *by the ordinary remedies*, if that be possible for the art.†"

Griesselich and Schroen say, "The antipathic

* Das jeder verständige Arzt diese (causa occasionalis) *zuerst* hinwegräumen wird, versteht sich von selbst; dann lässt das Uebelbefinden gewöhnlich von selbst nach.

† Dans tous les cas, où la *causa remota* continue à agir, nous regardons, autant que les médicins de l'ancienne école, comme *la première indication*, de la faire cesser *par les remèdes ordinaires*, si c'est possible à l'art.

method opposes to the morbid action, in the diseased organ, an action diametrically *contrary*, and seeks thus to remove entirely the primitive affection: this is a curative method founded in nature."

Rau, in his eighteenth proposition, clearly sees this, and distinctly says — "There are different methods of cure: each has its peculiar value."

Rau does not, however, any more than Griesselich and Schroen, understand the distinct relation which the opposite modes of treatment bear to morbid and curative symptoms. The latter, indeed, say, "All methods ought to have, for their foundation, an idea of the power inherent in nature;" which amounts to a rejection of antipathic treatment, since the rule "contraria" has nothing to do with this power in nature!

Now, we have seen that disease is change of the healthy state, and of the healthy action of parts; and nobody will doubt that such changes take place in the cases just adduced as examples of the employment of the rule "contraria"—in accidents like fractures, hæmorrhage from an artery, poisonings, or the slower disease of aneurism, or the general affection of freezing, or of asphyxia. Whether these be of accidental origin like the former, or of slower origin like the latter, they are still changes of the healthy state and healthy action of parts, and therefore diseases.

But it matters not by what name they are called:

they are an important portion of the objects of medical treatment—they are generally those cases of which the causes are at present known, and on that account alone, it is expressly declared both by Hahnemann and the homœopathic congress, that the physician must "commence by removing the cause," and that "the first indication is the causing it to cease by the ordinary [these are *antipathic*] remedies." And all the cases quoted above show that these remedies act on the rule "contraria contrariis curentur." Hahnemann adds, "then the disease usually ceases of itself." But there are innumerable cases in which this would not occur, and in which the rule "similia similibus" must be acted upon in order to complete the cure. This first rule, therefore, is imperfect without the second; and the second, it will be seen, would be equally imperfect without the first.

Thus homœopathy, without clearly understanding it, adopts and acts extensively upon the very rule which it at present deprecates. It rejects the rule in words inconsiderately employed. It unconsciously adopts it in practice—nay it gives what are really the operations of that rule precedence even of those of the rule "similia," as both Hahnemann and the congress have distinctly stated above. It is evident that, in this contradiction of doctrinally rejecting, and practically admitting, the rule "contraria," we must, in order to rationalize the procedure, be

governed by the practical admission of the rule; as hypothesis must yield to facts.

It is scarcely necessary to beg the reader to observe, that whatever opposes the remote cause of disease, must oppose also its immediate effects in the morbid symptoms.

It is now therefore evident that diseases can never be scientifically and surely cured, until we know, not only the remote cause, but the morbid symptoms, and the intimate nature, of disease; for, even in homœopathy, if it become rational, it will henceforth be the first question, "Which are the curative symptoms?" and, if the morbid ones be unknown, how shall the curative ones be distinguished? Thus the nature of disease must be known.

From all that has been said, it follows, that the more medicine is advanced, and the more we know of causes and morbid symptoms, the more shall we be enabled directly to oppose them, the more enabled to act upon the first law, "contraria contrariis curentur," a law rendered the first in order of operation, both by Hahnemann himself, who, as is seen in the preceding page, directs the physician to "*commence*" by acting upon it, and by the central congress, who consider this as the "*first indication.*"

Here I may observe that, in acting according to this law, the minute doses of homœopathy can in no way be applicable. Medicaments are here destined to oppose the cause of disease and the morbid symp-

toms, as in poisons, &c.; and, according to the quantity or power of the cause, must be the quantity or power of the antidote.—But see what Rau has said in the fourth page preceding.

This mode of employing medicines in disease is, by Hahnemann, denominated the antipathic.

I cannot close this section without hinting at the evils which arise from misapplication of this law, in the common practice of medicine.

The first are those which arise from opposing, not merely the cause and the morbid symptoms, but also the curative ones. As many of the symptoms — all the curative ones, are not disease, but opposed to disease — being nature's efforts to cure, it is evident that all medicines which, like many in common practice, are opposed to these symptoms, must absolutely aid, support and confirm disease.

The rest of these evils are such as accrue from a hypothetical application of the law.

SECTION V.

THE RULE FOR THE GUIDANCE OF CURATIVE SYMPTOMS—"SIMILIA SIMILIBUS CURENTUR."

The remaining portion of the basis of natural and rational medicine, on which homœopathy acts, and whence it derives its name.

THE law "similia" appears first to have been mentioned by Hippocrates, in the 15th chapter of his book Περὶ τόπων τῶν κατ' ἄνθρωπον, as follows:—"Διὰ τὰ ὅμοια νοῦσος γίνεται, καὶ διὰ τὰ ὅμοια προσφερόμενα ἐκ νοσεύντων ὑγιαίνονται — *By similars, disease arises; and, by similars prescribed, men are cured of disease:* thus strangury, if it do not exist, the same which makes it, cures it; and cough, in the same way, as well as stillicidium urinæ, is caused and cured by similars." He also says (De Morbo Sacro) "Plerique morbi his ipsis *curantur* a quibus etiam *nascuntur*:" likewise "Per similia adhibita ex morbo sanatur" (De Locis in Homine). Moreover "Διὰ τὸ ἐμέειν ἔμετος παύεται, *Vomitus vomitu* curatur," is one of his aphorisms.

But he did not more clearly enunciate the homœopa-

thic principle than he indicated homœopathic treatment, not indeed by *infinitesimal*, but by *minute* doses —doses less than those which produce disease. In the 13th chapter of the same book, he clearly indicates minute doses in the following remarkable passage:— "For those consumed with grief and sick, and wishing to strangle themselves, the root of mandragora drunk in the morning, *in less quantity* however than excites insanity," &c.*

In modern times, Paracelsus is said first to have asserted that life is a mere organic process, the result of external action and internal reaction; that health and disease are processes of a similar nature, though of opposite character; that healthy reaction is directly opposed to disease, and endeavours to expel it from the body; that the Hippocratic law "similia similibus curentur," is the foundation of practical medicine; that to put health upon an equal footing with disease, the former must be furnished with the same arms as the latter, so that they may be like "two enemies," standing opposite to each other, both cold, or both hot, both in armour, and ready to enter upon the contest with equal arms; that the physician must then find an "arcanum" or specific medicine; and that this "arcanum" is always a "simplex."—"*Neque enim unquam ullus morbus calidus per frigida sanatus*

* "Mœrore confectis et ægrotantibus, ac se strangulare volentibus, mandragoræ radicem mane propinato, *minore tamen pondere*, quam quod insaniam excitet," &c.

fuit, nec frigidus per calida; simile autem suum simile frequenter curavit."

Van Helmont, the follower of Paracelsus, says of him:—"At length, in the fervor of contradiction, he placed all cure in the similitude both of the nature and causes of disease to the remedy itself."*

Stahl says, that the medical rule of treating disease by opposite remedies, is entirely false and inconsistent; that, on the contrary, he is convinced, that diseases are cured by medicaments, which produce similar disorders, as frost-bites by snow or icy cold water, burns by exposure to heat, inflammation and bruises by spirits, &c.

Many other writers have advocated the same principles.—Latterly, Hahnemann has further sought to establish it, and has extensively applied it.

As to the meaning of this rule, an observation must here be made. Its ultimate tendency is contrary to the morbid symptoms or disease; but as its primary or immediate action is in aid of the curative symptoms, however ignorant of that its administerers may be, its title "similia similibus" is fully vindicated.

The supposed use of the principle "similia" in the ordinary practice of medicine, may first be noticed.

* "Tandem fervore contradicendi, *omnium medelam constituit in similitudine tam naturæ quam causarum morbificarum, cum ipso remedio.*"

In that practice, say the homœopathists, the law "similia," without being recognized as a distinct rule, is the principle upon which all specifics act. Thus arnica, which has long been used on the Continent for the cure of wounds, contusions, sprains, &c., is said to produce very similar effects to those which are caused by these,—inclination to vomit, sharp and burning pains in the hypochondria, sudden and involuntary motions, &c.; (?) sulphur, which is a popular remedy for the itch and other cutaneous eruptions, produces an eruption which closely resembles that of itch; (?) mercury, which is a well-known remedy in syphilitic diseases, produces effects so similar to those of syphilis (?), that it is often doubtful whether the disease is mercurial or syphilitic! &c. &c.*

* Mercury generally hazards a new disease, into which syphilis passes in a manner not hitherto perhaps quite correctly observed, because its mode of operation is not perfectly understood.

Mercury appears to be a poison which the system rejects. It escapes by the most delicate and feeble surface; and therefore by the gums, or still more easily by any open sore. If the sore is venereal, it apparently carries away that poison, when used cautiously and in small quantity. If used in larger quantity, it continues to pass out by the same sore, carrying always matter along with it, until every particle of the mercury is thrown out and great loss of substance ensues. The sore is then a mercurial one; and that at a much earlier period than seems to be commonly imagined.

The secondary symptoms appear to be partly, and the sores that then occur in remote parts, are altogether, of this nature. The latter continue until every particle of mercury is cast out; and in

Hahnemann observes that, in the ancient school of medicine [which is, luckily, also the modern one], the most skilful physicians "apply to the numerous evacuants which they employ, the name of derivatives, and, in so doing, pretend that they do nothing more than imitate the nature of the disordered system (the acts of the vis medicatrix naturæ)."

"In aid of this derivative system, they likewise employ another, which bears great affinity to it, and which consists of counter-irritants. — In this, they again follow the example of pure nature, which, left to herself, endeavours to get rid of the dynamic disease by pains which she causes to arise in the distant regions of the body, by metastases and abscesses, by cutaneous eruptions or suppurating ulcers."

Thus they act upon the principle by anticipation. This law, however, is but occasionally and indistinctly appealed to by the common practice; the principle on which specifics act has been as little understood by it, as the principle on which antidotes act has been understood, or at least recognized, in homœopathy; and neglect of this, or rather, as already said, of all clear distinction between the morbid symptoms or disease, and the curative symptoms or efforts of

persons advanced in life, a habit even appears to be established of rejecting all superfluous matter by such a sore. It is observed that the application of hot water to coagulate the lymph which incessantly flows from the sore, aids in effecting a cure.

the vis medicatrix naturæ, has induced many of the errors and failures of that practice.

Homœopathy, on the contrary, adopts this law too exclusively, at least in hypothesis, and acts upon it as imperfectly as the want of all distinction between the morbid and the curative symptoms compel it to do.*

* The more exclusive view taken of this law by homœopathy is thus stated by Hahnemann.†

"The symptoms are *the only part of the disease* accessible to the physician, and the sole indication whence he could derive any intuitive notion.—The visible change produced in the interior of the body, and the mass of symptoms perceptible to the senses, are so connected by mutual necessity, and united so intimately, that the one cannot stand or fall without the other—they must appear and disappear simultaneously. That accordingly which destroys the totality of the symptoms, must equally put an end to the morbid change in the interior of the organism.—*The totality of the symptoms, this external image of the essence of the malady,* must, then, be *the principal or sole object* by which the latter can indicate the medicines it requires —the only agent *to determine the choice of the most appropriate remedy.*—It is accordingly clear, that the physician has *nothing more* to do than *destroy the totality of the symptoms,* in order to effect a simultaneous removal of the internal change—that is, to *annihilate the disease itself.*"

Now "the curative powers of medicine being nowise discoverable in themselves, and the experiments which have been made by the most skilful observers not exhibiting anything capable of rendering them curative, except their faculty of producing manifest changes in the general state of the economy, particularly of healthy persons, in whom they excite morbid symptoms of a very decided character; we must conclude, that, when medicines act [homœopathically of

† I mark a few of the exceptionable words in italics.

It appears, then, that there can exist no doubt as to the truth and value of the rule, "similia similibus curentur."

course] as remedies, they do so only by their faculty of modifying the general state of the economy, and causing peculiar symptoms. Consequently, we must rely solely upon the morbid appearances which medicines excite in healthy persons, the only manifestation of their curative virtues, in order to learn what malady each of them produces, and what diseases they are capable of curing.

"But, as we can discover nothing to remove in disease, in order to change it into health, *except the totality of the symptoms*,—as we also perceive nothing curative in medicines but their faculty of producing *morbid symptoms in healthy persons*, and of removing them from those who are diseased, it follows that *medicines assume the character of remedies*, and become capable of annihilating disease *only by exciting* particular appearances and symptoms, or *a certain artificial disease* which destroys the previous symptoms—that is the natural disease, which they tend to cure.

"We select from all others that medicine (in order to direct it against the entire symptoms of the individual morbid case) which has the power of producing an *artificial malady*, the nearest in resemblance to the natural disease before our eyes.

"Experience proves to us that the medicine whose action upon healthy persons produces the greatest number of symptoms resembling those of any disease, possesses also (when administered in proper doses) the power of suppressing, in a radical, prompt and permanent manner, the totality of *these morbid symptoms*—that is to say, *the whole of the existing disease*; it also teaches us that all medicines cure the diseases whose symptoms approach nearest to their own."

This view is equally adopted by the liberal homœopathists. Griesselich and Schroen say, "The chief labour of the physician is then the diagnostic. His duty is to compare the image of the disease with the images of medicines; and, after that, to choose the substance

But, as I showed that the law "contraria contrariis" is imperfect without this one, so is the rule "similia similibus" imperfect without the former; for it is according to the rule "contraria contrariis" that, in

of which the essential phenomena (by which we determine its character) may correspond with the essential phenomena of the disease (by which we are authorised to conclude on the nature of the latter).

"Specific medicines are not opposed to specific diseases in the sense of the old school. Each morbid case ought to be considered as standing alone, and treated with medicaments which have a specific agreement with the actual pathological state of the diseased organ. The word *specific* indicates then the mutual relation between the medicine and each entire case of disease." They add, "We think we ought to restrain the idea of specific medicines to those, the entire peculiarities of which *agree as much as possible* with those of the disease. The medicament having *the greatest affinity* to a disease is that which affords the most correct image of it."

The examples of cures by specifics already mentioned in this section, sufficiently illustrate these statements of Hahnemann, Griesselich and Schroen, as to physical diseases.

A French writer deems the rule "similia" equally applicable to mental affections. "It is not," says he, "by mirth and pleasure that grief is to be assuaged: the feelings of those who are a prey to mental affliction would be destroyed by the suggestion of such a remedy. An opposite course must be pursued: it is by mingling our tears with theirs, by associating other images of sorrow with those which press upon them, by adopting the language of the poet,

'O! let me join
Griefs to thy griefs, and echo sighs to thine,'

that their spirits are tranquillized, and that serenity is gradually restored."

innumerable cases, we must first remove that cause, without which the rule "similia similibus" would be employed in vain; and this is enjoined by Hahnemann himself.*

* Besides the two methods now described of applying medicines, namely, according to the two laws, "contraria, &c.," and "similia, &c.," there is no other but the allopathic, heteropathic, derivative or revulsive, in which remedies are administered which produce symptoms that bear no direct reference to those of the disease itself. This method is founded on the axioms: "Ubi stimulus, ibi fluxus" and "Duobus doloribus simul obortis, non in eodem loco, vehementior obscurat alterum."*

The excitement of artificial revulsions must have been suggested by the spontaneous revulsions called crises, metastases; and such treatment is of great use in disease. Griesselich and Schroen call this "a true curative method;" and Hahnemann regards it as "an imperfect imitation of the attempts made by the vital powers, when abandoned to their own resources, to save themselves at all hazards."

It is indeed an indirect homœopathic method, which does not, in the estimation of any party, approach in value to either of the preceding. The common practitioner of intelligence employs it chiefly to relieve urgent symptoms, or those which threaten the suspension of important functions, and to obtain time to investigate causes.

* Hippocrates, Aphorisms.

SECTION VI.

EXPLANATION OF THE FACTS INVOLVED BY THE LAW "SIMILIA," &c.

"Happy is the patient whose physician possesses the best theory." DARWIN.

FACTS, if correct, admit always, when analytically examined, of reasoned explanation and support.

Generally received hypotheses, however, as to the foundation of the law "Similia similibus curentur" are altogether untenable.

The Hypothesis of Antagonist Disease.

Disease, says Hahnemann (for this hypothesis is his), "cannot be destroyed or cured in a certain, radical, prompt, and permanent manner, but by the aid of a medicine which is capable of exciting the entire group of symptoms which bear the closest resemblance to those of the disease, but which possess a still greater degree of energy."

Now if the effects of the medicine to be administered be more powerful than those of the dis-

ease, or, as Hahnemann himself here says, "of a still greater degree of energy," nothing can change or invert their relative power. Susceptibility in the organization must still be greater for the cause possessing greater energy. The medicines therefore would, if this hypothesis were correct, produce in the healthy subject, an artificial disease more violent than the natural disease had done — which is contrary to fact. This argument alone is fatal to the hypothesis.*

Supposing that the medicaments employed act

* But I desire to render the refutation more detailed.

"As this therapeutic law of nature," says Hahnemann, "clearly manifests itself in every accurate experiment and research, it consequently becomes an established fact, however unsatisfactory may be the scientific hypothesis of the manner in which it takes place. I attach no value whatever to any explanation that could be given on this head.† Yet the following view of the subject appears to me to be the most reasonable, because it is founded on experience alone."

"Every disease which does not belong exclusively to surgery, being a purely dynamic and peculiar change of the vital powers in regard to the manner in which they accomplish sensation and action, a change that expresses itself by symptoms which are perceptible to the senses, — it therefore follows, that the homœopathic medicinal agent selected by a skilful physician will convert it into another me-

† "There are," says Darwin, "some modern practitioners, who declaim against medical theory in general, not considering that to think is to theorize, and that no one can direct a method of cure to a person labouring under disease without thinking, that is, without theorizing: happy, therefore, is the patient, whose physician possesses the best theory."—To theorize is even more than this: it is to assign the true and only reason for events.

similarly to the disease, the first objection that naturally occurs is, that in active and dangerous diseases, the effects of these medicaments, acting intensely or feebly in conjunction with the disease, must, when-

dicinal disease which is *analogous*, but rather more intense. By this means, the natural morbific power which had previously existed, and which was nothing more than a dynamic power without substance [the error of this kind of mysticism has been already pointed out] terminates, while the medicinal disease which usurps its place, being of such a nature as to be easily subdued by the vital powers, is likewise extinguished in its turn, leaving, in its primitive state of integrity and health, the essence or substance which animates and preserves the body."

Here we are presented with the inconsistency of the *more intense* artificial disease being overcome by that vital power which was quite unable to overcome the *less intense* natural disease! And here also the medicinal disease is deemed *intense*, though in treating of reaction (in the following sub-section) we are told that there is "*no perceptible reaction* after weak and homœopathic doses."

"This hypothesis, which is highly probable, rests upon the following facts.

"Medicines (particularly as it depends on us to vary the doses according to our own will) appear to have greater power in affecting the state of health than the natural morbific irritation; for natural diseases are cured and subdued by appropriate medicines."

It will be seen that the power of homœopathic medicines, when rationally administered, depends not on their strength being greater than that of disease, but merely on their assisting certain curative efforts excited by diseases themselves — a far stricter, safer and surer procedure.

"The physical and moral powers, which are called morbific agents, do not possess the faculty of changing the state of health unconditionally; we do not fall sick beneath their influence, before the economy is sufficiently disposed and laid open to the attack of mor-

ever life is at its last ebb, prove fatal; and this objection is not at all obviated by observing that "the quantity is not great, but the repetition frequent," &c. &c.

bific causes, and will allow itself to be placed by them in a state where the sensations which they undergo, and the actions which they perform, are different from those which belong to it in the normal state. These powers, therefore, do not excite disease in all men, nor are they at all times the cause of it in the same individual.

"But it is quite otherwise with the artificial morbific powers which we call medicines. A genuine medicine will at all times, and under every circumstance, work upon every living individual, and excite in him the symptoms that are peculiar to it (so as to be clearly manifest to the senses *when the dose is powerful enough*) to such a degree, that the whole of the system is always attacked and in a manner infected by the medicinal disease, which, as I have before said, is not at all the case in natural diseases."

But the same would infallibly be the case, if natural morbific agents were as determinedly applied to the body, introduced into the stomach, &c., and that in *doses powerful enough* — a condition which Hahnemann very prudently stipulates for!

"It is therefore fully proved (!) by every experiment and observation, that the state of health is far more susceptible of derangement from the effects of medicinal powers than from the influence of morbid principles and contagious miasms, or, what is the same thing, the ordinary morbific principles have only a conditional and often very subordinate influence, while the medicinal powers exercise one that is absolute, direct, and greatly superior to the former."

The inaccuracy of the premises having been shown, that of the conclusion follows. The conditions under which medicines and diseases act are perfectly analogous; and natural morbific principles have an influence which upon the whole is by no means subordinate to medicines. Were it otherwise we should have neither death nor disease!

Similarly inaccurate is the following illustration. "Physical and

The hypothesis, however, of an artificially excited disease overpowering the natural one, involves, as the preceding notes have already indicated, a gratuitous and unreasonable assumption, that the organism is more feebly affected by natural diseases, than by medicines—by violent, rapid and life-destroying maladies, than by gently acting medicaments! It needs, therefore, no further reply.

But even if the artificially excited disease were more powerful than the natural one, why should it at all interfere with the latter? The answer to that question, which shall forthwith be given, will show that the interference takes place on a very different principle from that of relative strength.

Hahnemann himself says, "Even nature herself cannot cure an existing disease by the excitement of a new one that is dissimilar." — No: the artificially excited disease must have curative symptoms similar to those of the natural disease, and the former curative symptoms, aiding or encreasing the latter, the original disease will be cured.—But of that in the sequel.

moral affections are cured in the same manner. Why does the brilliant planet Jupiter disappear in the twilight from the eyes of him who gazes at it? Because a similar but more potent power, the light of breaking day, then acts upon the organs."

In this case, the light of Jupiter is only apparently extinguished; and if diseases are only analogously cured, then do they last for ever!

One remark, I may here append, namely, that, if it were thus that homœopathy cured diseases, by exciting merely *analogous* diseases (for Hahnemann says distinctly they must not be of the same species), it would be a mere adoption of the revulsive method, against which he so strongly protests! Strange oversight and inconsistency, that homœopathy should cast itself for support on pure and unalloyed allopathy.

The Hypothesis of Medicinal Reaction.

This hypothesis, Hahnemann himself does not give as explaining the homœopathic law, but merely explaining the "pernicious results of palliative antipathic treatment," § 58, which involves proportionate reaction: while he, on the contrary, contends that little or no perceptible reaction follows weak and homœopathic doses. As, however, many homœopathists, for lack of better, employ this hypothesis, in direct opposition to Hahnemann's views (for he depends on the hypothesis of antagonist disease and little or no reaction as the very cause of his gentle operation in homœopathy) its insufficiency should be noticed here.*

* I here quote from Hahnemann what, it must be remembered, he never meant should be so applied; and I do so only to reply to the homœopathists who use the arguments which are here refuted.

"Every agent," says Hahnemann, "that acts upon the human

Now, the same first objection which was made to the preceding hypothesis is applicable here, namely, that, on the supposition that the medicaments em-

economy, every medicine produces more or less some notable change in the existing state of the vital powers, or creates a certain modification in the health of man for a period of shorter or longer duration: this change is called the primitive effect.

"Our vital powers tend always to oppose their energy to this influence or impression. The effect that results from this, and which belongs to our conservative vital powers and their automatic force, bears the name of secondary effect or reaction.

"If there exists any state directly contrary to the primitive effect, the vital power manifests a tendency to produce one that is proportionate to its own energy, and the degree of influence exercised by the morbid or medicinal agent; and if there exists no state in nature that is directly contrary to this primitive effect, the vital power then seeks to gain the ascendancy by destroying the change that has been operated upon it from without (by the action of the medicine), for which it substitutes its own natural state (reaction.)

"A hand that has been bathed in hot water has, at first, a much greater share of heat than the other that has not undergone the immersion (primitive effect); but shortly after it is withdrawn from the water and well dried, it becomes cold again, and in the end much colder than that on the opposite side (secondary effect). The great degree of heat that accrues from violent exercise (primitive effect) is followed by shivering and cold (secondary effect). A man who has over-heated himself by drinking copiously of wine (primitive effect) finds, on the next day, even the slightest current of air too cold for him (secondary effect). An arm that has been immersed for any length of time in freezing-water, is at first much paler and colder than the other (primitive effect), let it be withdrawn from the water and carefully dried, it will not only become warmer than the other, but even burning hot, red and inflamed (secondary effect). Strong coffee in the first instance stimulates the faculties (primitive effect), but it

ployed act similarly to the disease, whether intensely or feebly, their effects must, whenever life is at its

leaves behind a sensation of heaviness and drowsiness (secondary effect), which continues a long time if we do not again have recourse to the same liquid. After producing somnolence, or rather a deep stupor by the aid of opium (primitive effect), it is much more difficult to fall asleep on the succeeding night (secondary effect). Constipation excited by opium (primitive effect) is followed by diarrhœa (secondary effect); and evacuations produced by purgatives (primitive effect) are succeeded by costiveness, which lasts several days (secondary effect)."*

"But," says Hahnemann, "it may be readily conceived that the healthy state will make no perceptible reaction in an opposite sense, after weak and homœopathic doses of agents that modify and change its vitality. On due attention, it is true that even small doses produce primitive effects that are perceptible; but the reaction made by the living organism never exceeds the degree that is requisite for the re-establishment of health."

And again, "When the doses are weak, no vestige ever remains, because in homœopathic cures, the living organism never reacts beyond what is absolutely necessary to bring the disease back to the natural state of health."

---

* In illustrating this principle, however, frequent errors are made. I may correct one by observing that, when the surface of the body is frozen at any part, no new reaction or new disease is caused by applying cold, but the natural reaction of the system — the vis medicatrix naturæ, is assisted in restoring heat by means of friction; and merely to prevent the reaction being in excess, the substance employed in friction is snow. It has truly enough been observed, that, if the snow were here used on homœopathic principles, it (or preferably ice) would be kept constantly applied, and, as may be imagined, with a certainty of aggravating the evil. The same is the case as to the application of heat to scalded parts. So also vaccine has been wrongly considered to act homœopathically in preventing small-pox, &c., for in that case, it ought to have had the power to cure small-pox, which it does not possess.

last ebb, in active and dangerous diseases, prove absolutely fatal.

As to physiological reaction, nobody doubts; but its application to homœopathy, as an illustration of its law, is quite unexplained. Natural diseases exist in every degree of feebleness or aggravation; they may progress through many or all of these degrees, unchecked; none of them may produce any such peculiar reaction as homœopathy describes;—but, on the contrary, a medicine supposed to be capable of producing, in a healthy person, similar derangement —what is called an artificial disease, is supposed also to produce, for the natural disease, this reaction— and *that* in any of its degrees — in any of its stages, although the natural disease is itself incapable of producing reaction at all. And hence such medicine is trusted to for the supposed production of such reaction.

Now, pretty illustrations of reaction under the influence of a single cause artificially applied, are easily understood, and great numbers of them can be furnished, as of heat following cold, or cold following heat; but as action and reaction are equal, as we have no proof that between any two such causes, whether natural or artificial, there ever takes place any swopping of the effects of one, for those of the other, this doubling of the cause—this adding of something artificial which is known, to something natural which is unknown, affords no explanation of

the question—"why is the slightest degree of a medically excited disease supposed to produce this peculiar reaction, when no degree of the similar disease naturally existing may be attended with it?" —"why is it supposed even to be necessary?" This presents only an apparently inexplicable difficulty, not an explanation.

It will be seen, however, in the sequel, that homœopathy needs to produce no peculiar reaction in any disease; that natural reaction already exists in every disease; and that we have only to assist that natural reaction in order to produce a cure.

Moreover, it has been well observed, that if homœopathic medicines act only by producing some new reaction against the disease, then is the law "contraria contrariis curentur," in a certain sense the sole and indisputable law of homœopathy, both in its immediate and its ultimate tendency; for, on this, does homœopathy now cast itself for support! It is impossible to add to the force of this argument.

The blunder, however, is none of Hahnemann's, as I have already said; for, far from assigning reaction as an explanation of the law "similia," he contends that the peculiar merit of homœopathic doses is, that they excite no perceptible reaction — the "pernicious result of antipathic treatment."

His followers, who generally appeal with surprising confidence, to the explanation which reaction affords, had better read the Organon once

more, little agreeable as that task may be. These gentlemen will find themselves not only not homœopathists, but decided antipathists.

I shall now, however, show that no rule ever had a surer foundation than the rule "similia similibus curentur."

The true Explanation.

It may be said that these hypotheses are of little consequence.—If, however, they had not been felt to be otherwise, they never would have been formed or adopted. The object of such hypotheses is the highly important one of rationally explaining the basis of the law—"Similia similibus curentur"—of showing that it is in harmony with natural phenomena and philosophical reasoning. Unexplained by some hypothesis, the rule itself becomes a mere vague hypothesis, instead of a rational theory; and its advocates assuredly desire to raise it above that condition.

I think, indeed, that the true explanation of the action of this law can be given, retaining all its experimental and practical worth—its essential part, and reasoning justly respecting it, while we rectify its language.

The reasoning, moreover, which is now to be applied, is amongst the very simplest and most indisputable in physiology. It has indeed been implied in many of the preceding arguments.

As, then, the common practice is founded chiefly on a consideration of the morbid symptoms and the maxim "contraria contrariis curentur;" so is homœopathy founded on a consideration of the curative symptoms and the maxim "similia similibus curentur."—Its medicines may be said indirectly to act *contrarily* to the *morbid symptoms*—the derangement or disease; but their direct action is *similar* to that of the *curative symptoms*, which they therefore assist.

In these efforts of nature, as already said, it is the vital system which becomes the healing one, as in fever, inflammation, &c., and it is the nervous system of life which indicates locality and calls up reaction, by pain and various disturbance.

Homœopathic medicines, therefore, neither produce such reaction, nor any such disease as the above mentioned hypotheses propose; they merely assist the already existing efforts of nature, the curative symptoms; and thus all complex explanation is at once got rid of.

Even minute doses thus require no "encreased sensibility of the diseased organisms," no "susceptibility for the action of specific irritants;" their action becomes one of the most simple and natural events—it is in harmony with and comes in aid of the efforts of nature, the curative symptoms—it adds their force to its own—it gives them a power paramount to the morbid symptoms or to disease properly so called.

Griesselich and Schroen are the writers who have most nearly approached this view, in saying, "As the healthy organism defends itself against that which attacks it from without, so the organism in an unhealthy state seeks to disembarrass itself of it—to preserve its independence.—Medicine can serve only to favour or to awaken this tendency." They wanted but the distinction between morbid and curative symptoms, in order to see the whole, and to apply it to the explanation of the rule "similia."

Thus Rau's third proposition, that "in the present state of our knowledge, this principle cannot be demonstrated *a priori*, but only in an empirical manner," is no longer true. Its reason is here assigned.

SECTION VII.

CORRECTIONS DEPENDENT ON THE PRECEDING VIEWS.

"To attempt to conceal or to explain away errors, is as mean as it is useless."

From the preceding views, it follows that the rule "similia similibus curentur," must not be understood as applying to the disease or morbid symptoms, as it has hitherto been in the language of homœopathy, as a consequence merely of its hypothesis, by Hahnemann deemed of no value.

Hahnemann says, "To effect a mild, prompt, certain, and durable cure of every species of malady, choose a remedy capable by itself of producing a malady similar (*ὁμοῖον πάθος*) to that which is to be cured."*

* Choisis pour opérer une guérison douce, prompte, certaine et durable, de toute espèce de maladie, un remède qui puisse produire par lui-même une *maladie semblable* (*ὁμοῖον πάθος*) à celle qu'il s'agit de guérir.

And again, "We ought to rely solely upon the morbid appearances which medicines excite in healthy persons, the only possible manifestation of the curative virtues which they possess, in order to learn what *malady* each of them produces individually, and at the same time what diseases they are capable of curing."

"Diseases," say the central congress, "may be cured by small doses of those medicines, which, in large doses, are capable of producing, on persons in health, *similar diseases.*"*

"Disease," says a French Hahnemannist settled in London, "is cured by such remedies as in healthy persons produce a similar *state of disease*;"† and these and other writers use such expressions as "the elements of *artificial disease*, which medicaments are capable of producing,"—"the *pathogenetic* power of medicaments,"—"*medicinal disease*," *&c.*

These expressions show, as from the premises was inevitable, that, in homœopathy, equally as in the common practice, no distinction is made between morbid symptoms and curative ones.

In direct opposition to all such language, the rule "similia," &c. must be understood as applying to the *curative symptoms*, and not to the *morbid symptoms*,

* Les maladies peuvent être guéries par de petites doses des médicamens qui, à fortes doses, sont capables de produire, chez des personnes bien portantes, des *maladies semblables.*"

† "Principles of Homœopathy," p. 69.

or the disease properly so called; for as has been shown, *these are directly opposed to each other*, and *there consequently cannot possibly exist any similarity as to both*. This distinction, I believe, will ultimately enlighten homœopathic practice.

The views of homœopathy respecting natural reaction or the vis medicatrix naturæ, and the language expressing them ought equally to be corrected, in order to render the doctrine throughout consistent. The reader has just seen the transcendant importance of the guidance which the vis medicatrix affords, and that upon it the law "similia," &c. and the whole doctrine of homœopathy depend.

From not observing this, Hahnemann, after speaking of the vis medicatrix as being "alike destitute of the power of reason, and incapable of reflection," says, of the physicians of the old school, "They copied nature, who could not, like an intelligent surgeon, bring together the gaping lips of a wound, and reunite them by the first intention; who, in an oblique fracture, can do nothing, however great may be the quantity of osseous matter which exudes, to adjust and attach the two ends of the bone; who, not knowing how to tie up a wounded artery, suffers a man full of strength and health to bleed to death; who, ignorant of the art of reducing a dislocation, renders its reduction in a very short time impossible,

by reason of the swelling which she excites in all the neighbouring parts; who, in order to free herself from a foreign body that had penetrated the transparent cornea, destroys the whole eye by suppuration; who, in a strangulated hernia, cannot break the obstacle but by gangrene and death; who, finally, in dynamic diseases, by changing their form, often renders the state of the patient worse than it was before."

Now, this amounts to a kind of complaint that there is in the world, any disease at all, or that nature does not do *everything* to cure,—a notion never before, I believe, attached to the vis medicatrix naturæ. It is enough that this power makes an effort for, and indicates the cure.—Strange that it should not be seen as the very basis of the first principle of homœopathy even by its founder!

Hahnemann accordingly speaks of "the miserable and very imperfect attempts which the vital powers make to assist themselves in acute diseases;" says that "this effort constitutes in itself a disease, and is another evil either added to the preceding malady, or substituted in its place;" that "the whole proceedings by which the system delivers itself from the diseases with which it is attacked, exhibit to the observer only a tissue of sufferings, and show him nothing which he can, or ought to imitate, if he truly exercises the art of healing;" that "these operations of the vital power proceeding to combat an acute

disease solely in conformity to the laws of the organic constitution, and not according to the inspirations of a reflecting mind, are, for the most part, merely a section of allopathy;" and that "since this healing art consists merely in the gross imitation of a useless, vain, and often injurious effort, it must be conceded that the true art of healing remained undiscovered till my time!!!"

This last would, if correct, be an unfortunate declaration for the *pretensions* of homœopathy; for its result would be an admission that since the vast section of the healing art which regards the curative symptoms and the law "similia," &c., really is, as I have proved, founded solely upon the imitation of the vis medicatrix naturæ, thus, mistakenly stigmatized, therefore, this section of the art of healing was discovered long before his time.

It may happen, says Dr. Parry, "that the means, which, according to the laws of animal life, cure the disease, may kill the patient. This is the case with regard to effusion of blood, either into the parenchyma or cells of the lungs, which often occurs in peripneumony; and it is often true in the effusion of fluid into the ventricles of the brain in hydrocephalus. The theory of the curative principle is nevertheless just; and the process, in a great majority of cases, is beneficial to the animal frame."

The merit of Hahnemann on this point is actually to have imitated nature (which he so strangely stig-

matizes) more closely than was done before. The chief difference between the revulsive method, and the homœopathic, is that the former is a "gross" and the latter is a more accurate imitation.

To return to the vis medicatrix naturæ, Hahnemann himself makes occasionally such statements as should have satisfied him of its being, as I have proved, the very basis of the law "similia," &c. He, indeed, virtually admits it to be so.

"Diseases," says he, "that are moderately acute, are the only ones that *terminate quietly, when they have reached the natural term of their career*, whether weak allopathic remedies be applied to them or otherwise: *the vital powers, when reviving, gradually substitute the normal state in the place of the anormal*, which by degrees is become weakened."

Here then *the vital powers reviving* or the vis medicatrix naturæ—this power which makes such "miserable attempts," this "other evil added to the malady," this "tissue of sufferings," this thing "which ought not to be imitated," this "section of allopathy," this "useless, vain and often injurious effort" — here this stigmatized and calumniated nature, unaided and of itself, cures the disease!

Similarly, Griesselich and Schroen say, "A very great number of cures are produced only by the vis medicatrix naturæ;" and again, "Many cures, homœopathic as well as allopathic, which have been published, have been performed by the mere curative

power of nature, and that often in spite of the employment of medicines entirely opposed to it."

But this result is not to be expected on all occasions, because life and its powers tend gradually to decay.

Even under the worst circumstances, however, the efforts of the vis medicatrix are curious and wonderful. Mr. Cooper observes, that "one remarkable circumstance always attending sphacelus, appears to merit particular attention, as it demonstrates the friendly effort made by nature for the preservation of the patient.—When a limb sphacelates, the blood coagulates in the large arteries leading to the parts affected, and this for some distance from the line which marks the extent of their destruction. Now, if this were not the case, the patient would inevitably bleed to death as soon as the process takes place by which the sloughs are thrown off; but, except in hospital gangrene, and some particular cases of phagedenic sloughing, hemorrhage is rarely to be feared in mortification."—This beneficent effect, however, may rather be owing to the circumstance that, at the time of separation, adhesive inflammation closes the vessels.

I have but one more observation to add in this section, namely, that as the ordinary medicine has erroneously applied the law "contraria," &c., to the curative symptoms, so homœopathy has unavoidably misapplied the law "similia," &c. to the morbid

symptoms, and thereby procrastinated the cure of disease. For this is the inevitable result of the assertion "that the physician has nothing more to do than destroy *the totality of the symptoms* in order to annihilate the disease itself."

I have already explained why in practice this procedure has been less injurious than might have been expected.

SECTION VIII.

PAIN—THE MEANS OF DISTINGUISHING MORBID FROM CURATIVE SYMPTOMS—THE ACT OF THE NERVOUS SYSTEM—THE EXCITEMENT* OF THE VIS MEDICATRIX NATURÆ.

"Dolore sia come stromento di natura sanatrice, sia come mezzo del' arte."

MOJON.

PAIN appears always to characterize the morbid symptoms. This renders necessary some enquiry into the nature of pain.

In my work on "The Nervous System," which I shall here chiefly follow, I was led into the enquiry respecting pain; and it was there my object to show that its nature was not understood by Sir C. Bell, when he deemed the posterior columns of the spinal marrow and the posterior roots of the spinal nerves sensitive, because, as he asserted, they evinced more pain when cut than the anterior ones.

* Or exciting portion.

I there showed that pain and common sensation—the sense of touch, are wrongly confounded. We have been led to connect pain with touch, because, as pain may be found where there is no vision, hearing, smell, nor taste—as it may be produced throughout the surface of the body, and as touch also extends over this surface, they have been easily associated.

The object of the sense of touch is form. If pain, then, belong to the sense of touch, what impression, or what notion does it give us of form?—But supposing pain to be exclusively dependent on nerves, it is by no means probable that it is dependent on those of touch, which is a peculiar mode of sensation; for not only does pain leave us unacquainted with the peculiar objects of touch, but, in the human body, each peculiar mode of sensation has its peculiar nerves. The nerves of smell, vision and hearing, do not evidence pain when injured; and analogy is therefore altogether in favour of the nerves of touch being equally exempt from it.

In his valuable compilation on Physiology, Müller makes the following statements:—

"Irritation of the nerves of sight and the retina gives rise to no pain, according to M. Magendie, but to the perception of light, as we know from common experience of the effect of pressure or a blow upon the eye.—Mechanical impressions on the auditory nerve, such as are produced by the vibrations of

sonoriferous media, or the jarring of the head and ear in long journeys, give rise to the sensation of sound, but not to pain, of which it appears that the auditory nerve is not susceptible.

"The stimulus of galvanism excites in all the organs of sense different sensations, in each organ, namely, the sensation proper to it.—In the eye, a feeble galvanic current excites the special sensation of the optic nerve, namely, that of light.—In the auditory nerve, electricity produces the sensation of sound.—When a piece of zinc is applied to the point of the tongue, and silver to its back part, an acid taste is produced.—It has not at present been much observed, whether peculiar smells are produced by the application of galvanism to the organ of smell; Ritter, however, has perceived them; and it is a known fact, that the electricity excited by friction gives rise to the smell of phosphorus."

Every view of the subject thus renders it evident that parts of specific sensation are unsusceptible of pain.

From many circumstances, it would appear that pain is connected only with that portion of the nervous bundles on which life more immediately depends—that is, the sympathetic system, as it is called.

It is true that the trunks of the thoracic and abdominal nerves and their centres, the ganglia, are, like the brain, generally unsusceptible of pain; but when

their condition under noxious agents or injury is such that it affects the brain, no pains are more acute. And Müller remarks that "the painful sensations felt in diseased states of the parts supplied with sympathetic nerves only, prove, much more clearly than experiments can do, that these nerves have sensitive endowments."

The cause, then, of the derangement affecting the nervous system during pain, may be the separation more or less perfect of vital parts, and the consequent obstruction of vital functions. Pain, accordingly, is actually less at the moment of touch accompanying it than afterwards. Hence the sense of pressure, especially when a cut part is pendent; and hence the cessation of pain on the re-establishment of union.

It appears, indeed, probable that the pain arising from division and other injuries, depends, locally at least, on the branches of the sympathetic investing the divided vessels.

It is remarkable that pain, in the case of a cut or similar injury, is not an instantaneous effect; some time elapses, and it would appear that some new action is always set up before it is felt; the vessels are evidently excited; the blood is poured out; and the pain absolutely increases for some time afterwards.

Now, if touch and pain were identical, or if they depended on the same nerves, the perception of the

contact of the surface of the body with the substance inflicting the injury, and the perception of the pain suffered, would exist at the same instant of time. Hence evidently pain and touch are essentially different.

Further, it appears that if even an extensive wound be inflicted with extreme rapidity, not even the slightest sense of touch accompanies its infliction, and the flow of blood or the loss of limb first announces the injury. Touch and pain, therefore, depend on causes entirely different.

Nor is this all: the arguments hitherto employed are derived from the general organ of touch itself—the surface of the body; but pain may exist in internal organs which are never liable to the sense of touch, and where two circumstances, elsewhere so nearly, if not strictly co-extensive, cannot be confounded. There is therefore neither connexion nor analogy between susceptibility of pain and the sense of touch.

Finally, when the sensibility of the skin to touch has been lost, it has remained sensible to heat, and consequently susceptible of pain. This appears to be absolutely decisive as to this point.

In all these cases, pain is shown to be different from touch, by existing distinctly from and independently of it. But it may also be shown, that both may exist in the same part, at the same moment, and still remain distinguishable from each other.

If upon any healthy surface, two impressions of form be at the same time made, they will be observed to be indistinct in proportion to their complexity; and that evidently because they are of the same kind. If, on the contrary, upon an inflamed surface, in which pain already exists, any impression of form, simple or complex, be also made, it will thereby become only the more distinct; and that evidently because touch differs in its nature from pain, and is rendered more distinct by being contrasted with it.

Every thing convinces me that pain arises from the separation of parts naturally connected, and from the consequent obstruction or want of harmony between their actions, distinguished as that must be by the ganglionic nerves or those of the vital system, which have nothing to do with specific mental sensation.

Dr. Alison, indeed, tells us that "pain is little to be depended on as a mark of organic disease. It may be felt strongly when there is no such disease, and be intense when such disease is slight, or when the fibres of a nerve are compressed or stretched; it may be absent when the disease is very dangerous; and although the most malignant organic diseases are often attended with acute pain, yet it is usually liable to great and long remissions. It is very often to be regarded, therefore, rather as an accidental concomitant, than as an essential constituent

of such diseases. And in general, these diseases are to be recognised much more by alterations of sensible qualities, or derangement of functions, which may be detected by the senses of the practitioner, than by such uneasy sensations as are known only through the complaints of the patient."

An error pervades the whole of this passage, namely the not distinguishing active injury from disease. Pain accompanies injury alone. There is active injury, though not disease, when nerves are compressed or stretched, and therefore there is pain. There may be no active injury when disease is dangerous, or during remissions, and therefore there may be no pain. Though, consequently, it may be only an accidental concomitant of disease, it is an essential concomitant of injury done to vital organs.

Thus it appears that pain is the outcry of the vital system when suffering from injury.

"It is wisely and favourably so ordered by nature," says Locke, "that, when any object does by the vehemence of its operation disorder the instruments of sensation, whose structures cannot but be very nice and delicate, we might by the pain, be warned to withdraw, before the organ be quite put out of order, and so be unfitted for its proper functions for the future. The consideration of those objects that produce it, may well persuade us, that this is the end or use of pain."*

* Locke, Book II. Chap. VII. § 4.

It is therefore beautifully said by Mojon, a professor at Geneva, "La morte percuoterebbe in silenzio la sua vittima, se il dolore non fosse desto per prevenirla." Than pain, indeed, nothing can be more necessary to the protection of life. A moment's reflexion will show, that, were it not for the existence of pain, the destruction of the human race must have immediately followed its existence.

Now, it will be observed that pain, having no immediate connection with mental, but only with vital operations, can be under no control of the mind, but must involuntarily, inevitably and unerringly follow its cause — injury done to life. Indeed, were it not abstracted from the control of mind, and thus involuntary, inevitable and unerring, it would be utterly useless.

Thus, as I said in the beginning of this section, pain must ever characterize morbid symptoms and unerringly indicate their presence.

It is remarkable, moreover, that as pain accompanies the morbid symptoms, it immediately precedes the curative symptoms.

Every example of morbid and curative symptoms given in Section III, sufficiently shows that pain attends the former, and relative ease the latter. In every case of disease, indeed, the effects that immediately follow pain, whether they be a flow of serum and swelling, or the effusion of coagulating lymph,

or the formation of pus, or the ejection of morbid matter by cough, vomiting, diarrhœa, or perspiration, afford comparative relief.

Hence the writer formerly quoted says of pain "Sia come mezzo dell'arte"—it is as it were the means of the art.

Observation indeed shows that pain does not merely precede the curative symptoms, but that, as it was an effect of the morbid symptoms, so it becomes a cause of the curative ones.

In this respect, the agency of pain is of the most direct kind. "Even pain itself," says Dr. Parry, "simply existing, has a tendency to diminish the action of the heart, and, therefore, that increased momentum or fulness of blood, which seems to produce it." And Mojon says, "How often does acute pain excite such contraction in an open vessel as to suppress a mortal hæmorrhage."*

"Ubi stimulus, ibi fluxus." It is irritation or pain which excites that gentle reaction, that slight injection or incipient inflammation which cures the disease. Mojon nearly saw this.—"Is an organ irritated by a morbid cause? Pain is speedily excited in it, and calls thither an afflux of humours, by which the part is inflamed, and, by rendering more rapid the periods of the disease, health is soon restored to it: if this does not occur, the disease becomes

* Quante volte un vivo dolore non eccitò tal contrazione in un vaso aperto da sopprimere un' emorragia mortale?

chronic, and a long infirmity takes the place of passing pain."*

We are commonly told, however, that inflammation is characterized by pain, heat, redness, and swelling —pain being thus made, not a cause, but a constituent part of inflammation. But, that irritation and pain precede and cause incipient inflammation, is supported by certain opinions of able pathologists.

Bichat supposes that "an increase of *sensibility* is *prior* to the *afflux of blood* to the part."

Dr. Mackintosh says "I have performed experiments upon horses, which prove most satisfactorily the *influence* which the *nerves* have, even in chronic *inflammation*. It is well known that these animals are very liable to inflammation in the foot, from different causes; and I have seen horses who had been lame for months, cured by dividing the nerves immediately above the fetlock joint, the effect being sometimes instantaneous, and occasionally permanent."

The following observations of Andral will further satisfy the reader of the accuracy of the position that, in the order of sequence, pain precedes inflammation.

"Some local congestions are perfectly compatible

* Un organo è irritato da morbosa cagione? il dolore vi si reca ben tosto, ed ivi chiama un afflusso d'umori, ne infiamma la parte, e rendendo più rapidi i periodi del male, gli ridona una pronta salute; se ciò non avviene, il morbo si fa cronico, ed una lunga infermità tiene luogo d'un passaggiero dolore.

with the physiological, or healthy state of the system; such are the accumulation of blood in the capillaries of the cheeks, under *the influence of moral emotions,* and the general red state of the skin, succeeding to *violent exercise.* In other cases, similar congestions, though not actually amounting to disease, cannot properly be considered as healthy phenomena. Thus, the skin, when exposed to *too high, or too low a temperature,* or to *the action of irritating substances,* becomes red and congested; if these excitants be slight, and their application transient, the congestion occasioned by them does not interfere with the functions of the part congested, or of the general system; but *if the energy of their action be increased,* or *the time of their application be prolonged,* a true pathological congestion is gradually formed, attended with [preceded by] pain, and more or less of functional derangement, giving rise to different alterations of nutrition, and calling various morbid sympathies into action.

"As the physiological or healthy congestion, as it may be termed, passes by insensible gradations into the pathological, so this latter state passes insensibly into inflammation. No line of demarcation can be drawn between those affections; at least anatomy does not enable us to decide where one ceases, and the other begins: for instance, under *the influence of violent passion,* the vessels of the conjunctiva become injected, and the eye-lids grow red: from *the presence*

of a grain of sand precisely similar effects are produced; gradually and almost imperceptibly the hyperæmia, (or encreased quantity of blood) advances from *the slightest degree of congestion*, in which only a few vessels are visible on the conjunctiva, to *the most intense inflammation*, when all the capillaries are minutely injected, and the conjunctiva assumes that uniformly red and tumid appearance termed chemosis."

Here the precedence of irritation and pain to congestion and inflammation is clearly pointed out. The constancy indeed of this precedence, in every pathological event, is such as to warrant our regarding irritation and pain as the cause, and congestion and inflammation as the effect.—Thus mechanical and chemical irritation, including heat, applied to any part inevitably inflames it; and that this inflammation is produced only through the nerves of the part is shown by the section of the nerves of the stomach, the lungs, or the eye causing inflammation of these organs.

How then are we to explain the frequent apparent co-existence of pain and inflammation, which has produced the vulgar error of deeming the former a constituent and characteristic of the latter?—Thus: that, in the general locality already incipiently inflamed, continued injury either extends more deeply or more widely, and the newer pain thence arising co-exists therewith; and this, the general progress of

the inflammation will show. Even the same part, and the same particles may suffer additional and yet profounder injury, and thence additional pain. Moreover, the sensibility of inflamed parts being highly encreased, injury and pain are the results of every accidental impression. Indeed, when parts are inflamed, their motion becomes difficult or impossible, and when it does take place, new injury and new pain are inflicted.

Thus it has been shown, that this slight injection or incipient inflammation is neither the cause nor accompaniment, but always the consequence of pain; and, from an inquiry into its nature, it will further appear, that it is the chief, if not the sole instrument of the vis medicatrix naturæ.

Dr. Syme remarks that "inflammation is generally *proportioned* to the violence of the disorder and the *sensibility* of the part affected."

Dr. Macartney thinks, that the fact that even local *injury* excites *inflammation*, by operating on the *sensibility*, is proved, by its effects being proportioned to all the circumstances connected with organic sensibility. And he concludes that "as we have sufficient grounds for assuming that an *organic sense of iniury*, or danger, modified according to the causes which produce it, *necessarily precedes inflammation*, it is reasonable to conclude, that this is *the proximate or essential cause of inflammation*."—PAIN was the proper term to express that cause.

I may here remark that, as organic pain or that of the vital system is the forerunner of the vis medicatrix naturæ, so mental suffering is the great cause of moral improvement; for morals are founded on physics and have similar laws. Painful feelings are ever the means of calling up happy exertions; and it is worth while to quote a few remarks on this point, which illustrate the universality of this physical and moral analogy.

The French Encyclopædists observe "Les malheurs développent souvent en nous des sentimens, des lumières, des forces, que nous ne connaissons pas, faute d'en avoir eu besoin."

Foscolo, in the Ultime Lettere di Jacopo Ortis, acknowledges "che più il timor della bassezza che l' amore della virtù l' ha trattenuto sovente da quelle colpe che sono rispettate ne' potenti, tollerate ne' più, ma che, per non lasciare senza vittime il simulacro della giustizia, sono punite ne' miseri."

Monti says—

"Non sa che sia contento
Chi non provò il dolor:
La spina del tormento
Fa della gioja il fior."

And Cardan even asserts—"Voluptas consistit in dolore præcedenti sedato."

It may be imagined, however, that pain does not so closely accompany each morbid symptom as to characterise it, and to distinguish it from others.

But this would be contrary to the very condition of its being, as the instant effect, the very sense of injury, the warning of its existence. Facts indeed prove, in all simple and distinct cases, that pain does thus closely attend each morbid symptom. Mojon accordingly, though ignorant of all distinction between morbid and curative symptoms, observes that "the pain resulting from the slightest movement in a case of fracture is very advantageous for the patient, as it imperiously commands him to hold the injured member in a state of the most perfect immobility.*"

Nature, therefore, distinguishes morbid from curative symptoms; and it is from her hands that the physician receives this law. He accordingly outrages nature who excites morbid symptoms—symptoms accompanied by pain.

Many writers, even poets, have observed, that joy as well as pain has killed. Metastasio, in Ciro, has said—

"Quant' è più facile
Che un gran diletto
Giunga ad uccidere,
Che un gran dolor!"

The speedy deaths, however, and the gradual decay which pain produces, are incomparably more nume-

* Il dolore che risulta dal più piccolo movimento in caso di frattura, è vantaggioso assai pel malato, avvisandolo imperiosamente di tenere il membro offeso nella più perfetta immobilità.

rous. On this subject, Sir Anthony Carlisle informs me that, when a painful operation has been protracted for an hour, though no obvious organic lesion has been inflicted, the patient rarely survives; and that such also is the case when half the mere sentient surface of the body has been scalded. In the whippings also, to which English soldiers are so commonly subjected, it is the utter exhaustion of the nervous system of life, expressed by pain, that kills the victim dragged to the triangle — that reeking shrine of aristocracy.

The distinction of symptoms into those accompanied by pain, and those unaccompanied by it, will certainly be made by future writers; and meanwhile enlightened practical men will probably attend to it.

To inflict pain is especially opposed to the beneficent spirit of medicine; and the fact that, in as far as its feeble means permit, homœopathy has done so, amidst empirical procedure and neglect to reason, is too clearly shown by its materia medica, its imitation of the totality of the symptoms, and therefore of the morbid ones, and its consequent aggravations — though these are trifles compared with its want of means to oppose the morbid symptoms and its cruel trifling with them, deceiving and too often sacrificing the patient.

It will be the duty of the physician, after carefully distinguishing the morbid from the curative symp-

toms, to select the medicament which excites the fewest of the former and the greatest number of the latter, under the guidance of this law, that pain attends the morbid and ease the curative symptoms.

SECTION IX.

GENTLE REACTION, SLIGHT INJECTION, OR INCIPIENT INFLAMMATION—THE CONSEQUENCE OF PAIN—THE ACT OF THE VITAL SYSTEM—THE INSTRUMENT* OF THE VIS MEDICATRIX NATURÆ.

John Hunter considered inflammation (and he was right as to the excitement and injection which is its incipient state) as less properly a disease, than a disturbed, yet salutary, mode of action, consequent on violence or disease, and adapted to restore parts to their natural state.—My object is to show that this injection or incipient inflammation is the instrument of the vis medicatrix naturæ.

With this object, I must remind the reader that, in the preceding sections, pain was shown to be at once the immediate and inseparable effect of all violence done to animal organization, and the cause of this injection or incipient inflammation. It is now necessary to establish the latter point still more

* Or instrumental portion.

clearly, by showing the precise relation in which irritation and pain stand to incipient inflammation.

In the various organs of the body there is one system, which is primarily affected in inflammation, namely, that of the capillary vessels.

By microscopical observation of the changes taking place in these vessels in the transparent parts of animals, as the web of the foot of a frog, or its mesentery, in which inflammation has been experimentally excited, we observe first that the blood flows, from all points towards the part irritated; and secondly that its motion is accelerated. Indeed, in all experiments, though performed by persons who advocate opposite doctrines, the velocity of the blood is represented to be encreased in this state of simple excitement. During this state, however, the part affected is said to be so far from presenting the appearance of inflammation properly so called, that the size of the vessels is diminished, and the part paler.

When the irritation is continued, or when it has been so violent that the inflammation continues after its removal, the capillaries are observed to become gradually dilated; and it has been remarked, both that the globules begin to move slowly before the vessels dilate, and that the dilatation encreases in proportion to the slowness of their motion. The dilatation, moreover, becomes more widely diffused; for when the circulation in the smallest vessels becomes

very languid, those immediately preceding them in the course of the circulation begin also to be distended.

If the stimulus be long continued, or increased, the small vessels, which in the natural state, admit of only one series of globules, become so dilated as to receive an accumulation of a much less fluid and a redder blood. This blood loses its appearance of distinct globules, which now seem disposed to coalesce, and it moves much more slowly, than that which previously passed through the vessels. The part now appears inflamed; and the blood, which passes from these dilated capillaries into the veins, is deeply coloured, and seems to contain flocculi.

With the microscope, we further observe that the neighbouring capillaries are distended; that the blood within them not only inclines toward the point affected, but sometimes even in a retrograde direction; and that numerous vessels, previously unobserved, now appear, while, in the capillaries further removed from the same point, an accelerated motion of the blood takes place.

The larger arteries undergo no distention. They pulsate with great force; and, if they are divided, they project the blood further than in the uninflamed state; while the veins, in any given time, discharge also a greater quantity of blood. This general statement is sufficient as to the quantity of blood conveyed.

Such, at this period, is the state of the circulation in the part inflamed.

The external characteristics are heat, redness and swelling; the heat seldom rising more than a few degrees; the redness arising from the colouring matter of the blood now passing into vessels which had not previously admitted it; and the swelling depending on the increased quantity of blood in the arteries of the part, as well as an effusion of its serous portion.

Here we first obtain a glimpse of the salutary nature of the effort which has so far been made.

It is generally some time after such effusions have occurred, and when these are slight and transient, that the first termination of inflammation, that namely by resolution, or return of the vessels to their previous condition, takes place. To this resolution, indeed, there is always a strongly marked tendency, which clearly shows the salutary purpose of incipient inflammation.

But whether such resolution occurs or not, these effusions often continue; and their progress must therefore be traced.

It is when microscopic examination shows the flow of blood first to become retarded, that serous effusion makes its appearance. It becomes of more gelatinous consistence as the inflammation advances, containing globules of blood more or less deprived of colouring matter. There follows a distinct effusion of coagu-

lable lymph.—The surface also of a wound that does not bleed is covered with a layer of lymph, in the very moment of its infliction.

It is by this effusion, however slight, and by the gradual organization of lymph, that hæmorrhage from open vessels is arrested; that in all divided or lacerated textures, reparation of the injury is accomplished; that a medium is formed for the conjunction of fractured bones, as well as the means of constructing the walls of abscesses and aneurisms.—This is, in such cases, the simple and undisturbed effort of the vis medicatrix naturæ.

In this stage, microscopical examination shews, that canals, externally of reddish hue, and internally white, are formed in the lymph, and soon receive blood from the neighbouring capillaries, which, at first, they exceed in size, though they afterwards gradually contract. To the naked eye, these new capillaries first appear as reddish striæ, and afterwards as palpable vessels, shooting through the lymph.

When other, more complex, and morbid consequences follow, they are not imputable to simple and salutary incipient inflammation, but to causes which disturb its natural purpose, or to its being excited in such a degree, that the parts are more or less disorganized and cannot afterwards perform their natural functions.

The extravasation of blood or serum, or the intro-

duction of a foreign body, are events which alter the result of inflammation. Then, is shed lymph, by which the noxious matter or the foreign body is insulated; this lymph next acquires vascularity; and then commences the secretion of pus, an opaque liquid, of yellowish white colour, in which the partially decoloured globules of the blood are still further changed within and without the vessels.

Still the effort of nature is thus only modified. The pus protects subjacent parts from further injury; being bounded by lymph thrown out around it, it forms an abscess which swells outwards, or towards some cavity, where there is least resistance, in order to be discharged; and the cavity is filled up partly by granulations formed by the organization of lymph, and partly by compressed parts regaining their natural form and magnitude.

The natural process for the removal either of pus or extraneous matters, exhibits in a striking manner, as Dr. Macartney remarks, those elective actions of parts, which he ascribes to "a local or organic instinct, and which, like the instincts of animals, produce the same results as intelligence."

Pressure, also, and such causes as irritate parts already inflamed, alter the result of inflammation, by causing greater and more irregular absorption than usual of the lymph effused and of contiguous parts, and thereby constitute ulceration.

Still the effort of nature is only modified. The

effusion of lymph forms organized prominences, called granulations; and, though these and ulceration, going on at the same time, render the surface of the sore uneven, yet the organization of the lymph ultimately prevails over the process of absorption and the removal of parts.

Thus the simple and direct tendency of incipient inflammation is always salutary.

The injurious terminations of inflammation may similarly be due to its inevitably blending with modes of diseased action, or predispositions to disease already existing. In persons morbidly predisposed, inflammation may be fatal merely by the gradual depression of the powers of the circulation; or by serous effusions obstructing functions essential to life; or by abscesses, &c., within the head or chest, causing coma or asphyxia; or by the destruction of old parts, the formation of new ones, and the production of organic disease; or by gradual exhaustion of life during suppuration, ulceration or sloughing. But as these injuries do not take place in all persons, they affect only those predisposed to them, they consequently are not necessary results of inflammation.

The following remarks of Dr. Alison, though limited in their object, illustrate and confirm this general view. "As we know that the lymph which is thrown out by simple and healthy inflammation remains for an indefinite time quite inert, and undergoes gradual absorption, after inflammation has

subsided, it is clear that *some additional morbific cause* acts, whenever inflammatory effusions change their form, and especially when they encrease in bulk, after that period; and many observations show that, where such morbific cause exists, very little inflammatory action is required to give origin or continuance to the growth of adventitious textures, and the phenomena of organic disease."

It thus appears, that gentle reaction, slight injection, or incipient inflammation, is the instrument of the vis medicatrix naturæ.

SECTION X.

MATERIA MEDICA.

GENERAL OBSERVATIONS.—EXPERIMENTS ON PERSONS IN HEALTH.—SIMPLICITY.—MAGNITUDE.—DYNAMIZATION.—INFINITESIMAL DOSES.—ACTION.—DURATION.—REGIMEN.

THE medicines directly operating on the locomotive, nutritive and thinking systems, differ precisely as much in character as do these systems themselves, and the diseases which affect them.

As the parts of the locomotive system are large and its actions obvious, and all externally evident, so are its direct medicaments or curative means on a larger scale, and externally applied: — in fracture of bones, splints, &c.; in dislocation of joints, bandages; in ill regulated action of muscles and the deformity resulting from it, employment of antagonist muscles, &c.

As the nutritive system consists of tubes and their contained liquids transmitted by merely perceptible

motions, so are its direct medicines liquid or pulpy substances received by the preparative vital organs, to be transmitted through the same tubes, and applied to internal parts.

As the thinking system is chiefly composed of nervous matter, destitute of all action but that which may transmit external impressions, so are the medicaments directly acting upon it merely new impressions similarly transmitted.

These systems, however, may be indirectly acted upon by each other.

The nutritive system is not merely acted upon by the natural ingesta, but, being the means of nutrition to all the systems, is extensively employed, in an artificial way, as the recipient of medicines and the means of producing medical effects, not only on its own organs but on those of other systems. Still, however, it is on the vital or nutritive organism of such systems, that these medicines act.

Medicines thus taken into the stomach, may act either through the nutritive system itself, or through its nervous system. Some perhaps are taken up by the absorbents; while others affect the branches of the ganglionic system; and others, both absorbents and nerves.

In regard to the individual articles of the Materia Medica, Haller first proposed a reform, by means of

experiments on healthy individuals. His words are "First, *the medicine should be tried on a healthy person, without any foreign admixture;* its smell and taste being examined, *a small dose of it should be taken;* and attention should be paid to all the effects which proceed from it—the state of the pulse, the temperature, the respiration, the excretions.*

Hahnemann has further laboured this subject; and I notice him here as having carried out Haller's suggestion. Homœopathy, which the regular practitioner has neglected, must therefore be in a great measure the subject of this section. That great error attends the particular method adopted by Hahnemann, is certain. The central congress of German homœopathists, however, observe "We know that errors may and must creep in; and we are far from attributing every symptom to the remedy of which we make trial. We may be deceived as to the health of the person who serves for experiment; and the symptom may derive its origin from an accidental cause, from a disease resulting in other ways, from idiosyncrasy, or by the force of imagination in the individual. Accordingly, we do not regard the pathological symptoms which manifest themselves during trials, but as indications, as advices to try that remedy

* "Nempe *primum in corpore sano medela tentanda est, sine peregrina ulla miscela;* odoreque et sapore ejus exploratis, *exigua illius dosis ingerenda;* et ad omnes quæ inde contingunt affectiones, qui pulsus, qui calor, quæ respiratio, quænam excretiones, attendendum."

in the spontaneous diseases which present the same symptoms. It is only after repeated trials have given us the same results, that we place the remedy in question in the rank of those which we ought to employ in disease."

The chaotic state of the homœopathic materia medica, in which each remedy seems to produce almost every symptom, is likewise understood by this enlightened body of men. They say "We acknowledge also that the classification of symptoms by Hahnemann is defective. To intermix the symptoms which have been observed in different persons, without distinguishing what dose has been administered, what symptoms manifest themselves first, how these are grouped, in what order they succeed each other, without sufficiently distinguishing the objective symptoms, is not a method which enables us to recognize the organ first affected, the genetic relation of the symptoms, nor what is more important still, the character, the entire effect of the remedy, so that we ought indeed to think ourselves fortunate in falling upon the suitable medicament if there be no other guide than this nomenclature."

They know, too, that what has been done affords extensive materials for selection, and that persevering and judicious observation alone is required.—"We find," they observe, "in our experience, reasons of the most powerful kind for persevering in the same method [of experiment on persons in health], and

for being convinced that it is by numerous essays on persons of each sex and every age — essays checked by others on sick persons—that little by little we shall attain a knowledge of what is true and constant in each symptom, which will approach near to certainty. The effort of homœopathists to reject from the lists of symptoms, all those which are false or non-essential, and to form a kind of code of effects of the different remedies, pure, certain and applicable in practice, a true materia medica (the lists of symptoms drawn up to the present time, being considered but as materials) — these efforts are not made without result: we grant, however, that all which has yet been done is but the commencement."

This is the universal feeling of enlightened homœopathists. Griesselich and Schroen, the first reformers of homœopathy, had previously said, " All the trials of medicines made by Hahnemann require to be revised with care, on well established principles.— We do not think that we should do right in continuing to proceed with such trials after the manner followed by Hahnemann. As Hahnemannism in general, and under its most recent form, treats only of symptoms of diseases, neither is there considered by it more than the symptoms of medicines, which are ranged according to an order altogether arbitrary, and in the midst of which the physician cannot, without the greatest difficulty, obtain a clear idea of the entire impression which necessarily results from

the employment of certain means. There is no inquiry there of any medicinal disease, neither of its progress nor of its commencement, nor of its termination, and all is lost in a confusion of symptoms, of which we know neither whence they come, nor whither they go, nor how they act with regard to each other. It has indeed for a long time been complained that, in the actual state of the so-called pure materia medica, the discovery of a proper remedy to be employed is a very rare thing, and often a mere matter of chance in the hands of a homœopathist who has little experience.

"As physiology ought to precede pathology, which rests on it, so also the trial of medicines on a healthy subject ought to precede their trial on the sick patient. Neither the physiological trial, nor the pathological trial taken singly give to the physician sure indication for the employment of a medicament: the two trials naturally complete each other, and are almost of the same value to the physician, in as much as experience at the bed-side of the patient ought to confirm that which the remedy had promised to effect by its trial on the healthy subject."

Homœopathic medicaments, or more properly those which assist the curative symptoms, assume the character of remedies from exciting appearances in persons in health *resembling* the curative symptoms of natural diseases.

Of the medicaments employed in the common practice, Hahnemann, following Haller, truly says, "Every appearance of treating disease effectually, disappears in their manner of associating various medicinal substances to compose what they call a prescription;" —"mixing several drugs together, some of which are already compounds, and their separate effects imperfectly known."

"One of these ingredients destroys, either partly or wholly, the operation of the other, or gives to it, as well as to the remainder, an altogether different mode of action which has never been thought of, so that the effects calculated on cannot possibly take place."

As to the magnitude of doses, I must observe that our ordinary medicine generally opposes the symptoms; and hence it demands the employment of larger doses.

Homœopathy assists the curative symptoms; and hence it admits the employment only of minute doses.—In this view of the matter, there is no mysticism.

The ready accounting for the admissibility only of minute doses afforded by my previous explanation of the law "similia," is a striking proof of the truth of that explanation.

Deprecating all general measures in the dose,

Griesselich and Schroen say, "The principal condition of the relation of specificity is that the remedy be suited to the case in point. But a second condition (that there may be a correspondence with the existing degree of vital activity in the organism, as well as in the unhealthy organ) is that a proper dose be chosen. A fit medicine and appropriate dose ought to afford such assistance that the reaction of the organism may be able to display itself so as to bring about a cure.

"The degree of vitality, in a state of sickness, as in a state of health, is very different. Although one organism may resist the most powerful physical and moral influences, very slight ones are sufficient enormously to affect another. It is then, to act in an arbitrary manner, and to betray narrow views, to establish one general measure for all men [as Hahnemann has done.]

"The doses may be regarded as a scale, the degrees of which ought all to have an equal importance with the physician; otherwise he deprives himself of the means of acting on occasion, and leaves the patient to suffer, or even to perish, in consequence of the narrowness of his views. A medicament then may have been well-chosen, and yet produce no result, because the dose is not appropriate. Thence arises the jumping about from remedy to remedy, which we so often remark in the cases of homœopathists.

"The result," says Rummel, "may be stated thus:

cures are effectual with all kinds of doses, with decillionths as well as with drops not diluted, when the right medicine is used; but the cure is rendered more speedy in proportion as the dose is well adjusted to the excitability of the patient.

"If we reflect that frequently the gravest and most obstinate complaints give way with surprising rapidity to an extremely minute dose of the exact remedy, it becomes more and more evident, that circumstances are frequently mere accessaries, when the medicament has been properly selected; but that they acquire more importance, when the analogy is less decided between the medicament and the disease, and that stronger doses are then required to bring about a cure."

Rau, in his forty-third proposition, says—"The susceptibility of the patient, is the only sure guide to determine the quantity or the power of the dose."

I have quoted these paragraphs, because they briefly express the results of the practical experience, of the new and more enlightened homœopathists on several important points connected with the dose.

The value of doses relatively minute, applied to the curative symptoms, is indisputable; and they have been brought into discredit only by the childish hypotheses which have been connected with them by some homœopathists, and which the public wrongly imagine to be inseparable from their use.

As absurd error has been committed on the subject of a supposed dynamization or encreasing of the power of medicines, it is necessary I should briefly quote the most enlightened writers on the subject. They have said nearly all that could be desired respecting it.

It is evident, say the central congress, "that at the beginning Hahnemann saw, in dilutions, only simple diminutions of the powers of medicines, that he attributed to them uniformly a conditional force, dependent on the disease, and on the analogous pathic virtue of the attenuated medicament, and that he consequently directed the administration (according to the case) of a dilution more or less large, or of the original tincture itself. This doctrine was received by all homœopathists.

"If Hahnemann himself, more lately, has changed his opinion, if he has considered the dilution as an absolute development of power in the remedy, if he has accorded to it the absolute power of affecting the healthy [in minute doses] as well as the diseased, organism, we do not in any manner partake of his ideas,—we, on the contrary, oppose ourselves to them in a manner so much the more positive as an endeavour has been made to derive from them practical rules which we regard as entirely false.*

* Si plus tard Hahnemann lui-même a changé d'opinion, s'il a considéré la dilution, comme un développement *absolu* de la force du remède, s'il lui a accordé le pouvoir absolu d'affecter l'organisme

"We cannot grant an absolute development of power but to a certain number of substances which, in their natural state, possess but a feeble degree of medicinal quality (as for example, carbonate of lime, silica, lycopodium), but which acquire an energy much greater when their state of aggregation is altered. Moreover, we cannot admit a real development of their energy, but up to the point at which cohesion ceases as completely as possible in them: beyond that, this development is impossible."

"Solubility," says Rummel, "is also a condition in which the development of strength continues feeble or dwindles to nothing. Beyond the point within which there is a necessity for attenuating a particular remedy, in order to unfold its properties, these properties must of course decline; and this diminution of power is proved by impartial observation.

"There is a contradiction in saying that a substance is at once attenuated and rendered more potent by dilution, and likewise in attributing a longer and more lasting action, sometimes to the eighth and sometimes to the first dilution."

Griesselich and Schroen had previously said, "All the doctrine of the dynamisation of medicaments is contradictory in itself, and untenable.—It is a tissue

sain, ainsi que l'organisme malade, nous ne partageons en aucune façon ses idées, nous nous élevons au contraire contre elles d'une manière d'autant plus positive qu'on a cherché à en tirer des règles pratiques que nous regardons comme entièrement fausses.

of words arbitrarily employed, of ideas out of place, and of assertions contrary to the laws of nature.

"Hahnemann says always that caution should be had against the employment of dynamisations too low, lest they should act with too much power! and he recommends that those only which are high should be given, which, according to his theory, ought to be the strongest — those against which we should be most on our guard.

"As for the denominations, millionth powers, &c., they can only give ideas altogether false respecting the virtues of medicaments. They contradict also the Hahnemannic hypothesis of dynamisation, and are in all respects ridiculous.

"Besides, the action of development, which involves always that of attenuation, has its limits, and there arrives a point at which matter ceases to manifest itself to us by its activity. All the marvellousness of that pretended dynamisation which has been so strangely admired, ought to be sought for in the organism, which displays the capability of being affected by stimulants so feeble, rather than in the preparation of substances heightened by the length of the trituration."

All this strikes a blow at a fundamental source of extraordinary mysticism. I will nevertheless now offer a refutation of a consequence of that mysticism,

namely, infinitesimal doses; for the mysticism which has hitherto entered into most of the reasonings of homœopathy is especially conspicuous here.

Nothing, then, in man is infinite—neither the globules of the blood, nor those of the brain; and the ascription of infinity to any thing acting upon them, is as impossible of proof, as it is gratuitous.

The expression "infinitesimal" is moreover wrong and contrary to fact, because all the doses of homœopathy are absolutely definite, in a degree and with a precision unknown to the common practice!

Finally, if the doses of homœopathy were infinitesimal, there would be no measure, but on the contrary endless confusion in practice.

It is enough that homœopathic doses are minute, while the common doses are large. The notion of a *vital principle* led to this nonsense; but that is merely a *bad term* for expressing the *aggregate of the vital actions*.*

* I subjoin, in this foot note, the views taken of Infinitesimal Doses by two intelligent writers.

A MATHEMATICAL DEMONSTRATION OF THE ABSURDITY OF HOMŒOPATHY.

From a recent number of the "New York Journal of Medicine."

"The minuteness of the homœopathic doses, found in homœopathic works, precludes all belief in the results attributed to them.

"Cases of the minute division of matter, as proved by chemical tests, are irrelevant and inconclusive, as arguments to support the doctrine; the question at issue is, how small a quantity of a medicinal substance will affect the organism? Neither does the fact, that a very minute quantity of vaccine or variolous matter affects the system,

As to the *spiritualizing of matter* by trituration, &c., it is a gratuitous insult to modern philosophy.

In reference to this spiritualization and in general to all tendency to mysticism, I must observe that it is the mere adventitious result of habitual modes of

prove any thing in favour of the efficacy of minute doses of vegetable or mineral substances; for the former are specific poisons, producing specific results, which is not true of the latter.

"Simpson, Rau, Hering, Count de Guidi, as well as the leading homœopathists of this city, speak of the decided effects of the *decillionth* dilution; and the lowest homœopathic dilution to be obtained here, of medicines prepared in Germany, is the *third*, which is very nearly in the proportion of one drop of the tincture to one barrel of alcohol, or one grain of the extract to 400 weight of sugar. Simpson, the most judicious writer on homœopathy, states that his favourite dilutions are the 3rd, 6th, 9th, 12th, and 15th, though he often uses the 30th!

"One drop of the tincture + 100 drops alcohol=100 (1st dil.)
× 100=10,000 drops, or one pound (2d dil.)
× =1001,000,000, one barrel, (3d dil.)
× 100=100,000,000, one hundred barrels (4th dil.)
× 100=10,000,000,000, ten thousand barrels (5th dil.)
× 100=1,000,000,000,000, one million barrels (6th dil.)
× 100=100,000,000,000,000, one hundred million barrels (7th dil.)
× 100=100,000,000,000,000,000, one hundred thousand million barrels (8th dil.),

so that by the time we reach the 30th, it would form a mass of alcohol larger than the whole solar system!—A drop of the tincture, diffused throughout the waters of the Atlantic, would form a stronger solution than the 8th; and the same throughout all the waters of the globe, would be more concentrated than the 9th!

"If it be said, that homœopathic medicines are not often given in these doses, we reply, that such are the doses recommended in homœopathic writings."

thinking in Germany—the result of a kind of unphilosophical dreaming, among a people who often show themselves as incapable of severe reasoning as they

MR. SMITH'S REMARKS ON HOMŒOPATHY.

From the "Medical Gazette."

"An inquest recently held, in which some of the more striking features of the homœopathic treatment of disease were most lamentably exemplified, affords an opportunity of again directing attention to the absurdity and danger of this practice, which should not, I think, be lost.

"One fact (always deducible from the homœopathic writings), and, in the melancholy case of Mrs. Norrington, strikingly exemplified, might, one would imagine, satisfy, not merely the scientific pathologist, but the thoughtless multitude, that this "system" has no solid basis: *it offers no means for relieving constipation!* Imagine a system of therapeutics, which, confessedly, comprises no dose of medicine of sufficient power to remove a simple constipation of the bowels!

"I shall not, in this paper, dwell on the homœopathists' pathology, but proceed at once to their posology; for when I show you the *doses* of medicine employed, you will not fail to observe, and duly appreciate, the value of a system based upon the alleged fact, that such doses administered to a person in health will produce disease; such disease, when it occurs spontaneously, being cured by the same drug administered in a similar dose.

"Let us take opium—the drug said to have been ordered by the homœopathic physician for the late Mrs. Norrington. The dose of opium recommended by Hahnemann is two decillionth parts of a grain. This sounds mighty simple; and, until we look more narrowly at the power of numbers, is not so monstrous as it may be demonstrated to be, for it is impossible to conceive so minute a division of matter. But an unit, with sixty cyphers in its train, is, in reality, a formidable number. Persons have illustrated the absurdity of homœopathy, by recommending the throwing a grain of medicine into the Thames; they meant to exaggerate, but, in fact, had they substituted the Atlantic Ocean for Father Thames, they would have enor-

are almost always transcendant in the observation of facts. In Germany, science is as much pestered with spirits, as poetry is: there, science too often becomes

mously under-rated the degree of attenuation, as I will now proceed to show.

"The diameter of the earth is about 8,000 miles; the solid contents of spheres vary as the cube of their respective diameters. The population of the world has been calculated at about 800,000,000; and a homœopathic dose of opium amounts to two decillionth parts of a grain: upon these data we proceed.

"*R.* From one grain of opium abrade an atomic particle, which shall bear the same proportion to the whole grain that a spherule one-thousandth part of an inch in diameter bears to the globe on which we stand; divide this particle among the whole population of the world, cause each individual to swallow a homœopathic dose every second, and it would require 20,000,000 of years for them to swallow the particle described. I ask the reader to ponder on this for a moment, and then read the following quotation from Hahnemann's 'Organon of Medicine,' note, § 283: 'I have often seen a drop of the tincture of nux vomica at the decillionth degree of dilution produce exactly half the effect of another at the quintillionth degree, when I administered both one and the other to the same individual, and under the same circumstances;' and then he gravely tells us, 'if the patient is very sensitive, it will be sufficient to' — what does the reader imagine? — 'to smell a phial that contains one of these globules.' [It should be explained that the drug is made up into globules by means of sugar.] After the patient has smelled to it, the phial is to be recorked, which will thus serve for years.

"One further illustration, and I will cease. Opium is a potent drug: let us take capsicum, which some of us eat rather allopathically. What dose of this does the leviathan of homœpathists recommend? He would give one trillionth of a grain. This is given either in a globule of sugar, or drop of spirit of wine. Let us take the latter as the vehicle. Suppose we wished to attenuate one grain of capsicum,

a mere work of imagination! Of this, no better specimen can be given than the rude form of homœopathy called Hahnemannism, which begins with spirits and ends with spirits; for, in it, both diseases and medicines are boldly and repeatedly declared to be of a spiritual nature! — which has given an opportunity for calling homœopathy "spiritual medicine!"

The usual rage for novelty could alone introduce this mysticism into the country of Montaigne and Condillac, which has, at the same time, borrowed from Germany the *école mystique* in painting and *romanticisme* in poetry!

how much spirit of wine would it require, allowing one minim for each dose? The area of the great Pyramid of Egypt is 480,250 square feet; and its height, 499 feet, say 500; its solid contents are therefore 80,041,666 cubic feet. Say we have 378,875 minims of spirit of wine in a cubic foot, divide the trillion by this number and the result is, we have above 2½ billions of cubic feet in a trillion of minims; extract the cube foot, the result is 13,750 in feet, which will be the length of each side of a cubical vessel which will hold a trillion of minims of pure spirit, *i. e.*, it must be above two miles and a half long, two miles and a half wide, and two miles and a half high; or, comparing it with the great Pyramid, it would require above thirty-two thousand six hundred Pyramids to contain spirits of wine to dilute one grain of capsicum. Thus, have I presented you with an accurate description of the homœopathic doses of medicine deliberately recommended for the cure of disease. Can any person, having the common feelings of humanity, contemplate without a shudder the treatment of acute disease by such means? Can its professors in this country, after this appeal, pursue this dangerous course? Is it ignorance that prompts them to pursue this course?"

Mysticism, happily, never can find favour in the land of Bacon and Locke—never assuredly among philosophers and men of science. Nay, the very miners at Lead Hills, who boast a splendid library underground,—or the weavers of Glasgow, who pay the worst workman in every room his wages for reading to them while they labour,—or the shepherds on Tweedside, from under whose plaid may be seen the last Number of the Edinburgh or the Quarterly, would laugh to scorn spiritual diseases and spiritual medicines. Such dreams, however, have no more to do with rational homœopathy, limited as is its range of utility in medicine, than rational homœopathy with the disgusting quackery of mesmerism or animal magnetism.

"The medicaments made use of in homœopathic treatment can be given," say Griesselich and Schroen, "at all times of the day, when otherwise they are indicated.—The observations of other homœopathists have shown that an appropriate medicine, administered in a proper dose, is productive of good at all times, and that circumstances often happen which require the prompt employment of the remedy indicated, without admitting of any delay, as in acute diseases.

As to the action of minute doses on the nerves, Dr. Curie quotes my opinion on that point in his Principles of Homœopathy.—"Mr. Walker," he says,

"the author of an elaborate work on the Nervous System, is of opinion, that the homœopathic doses cannot act either on the nerves of common sensation or those of taste in the tongue (the lingual branches of the trifacial and of the glosso-pharyngeal nerves), because it is the general characteristic of nerves of sensation passing toward the brain, to be accompanied by consciousness and to terminate in perception, which is not the common effect of homœopathic doses. He nevertheless thinks that our want of consciousness and perception of the action of these doses, is still no argument against their acting on the nervous system, because it is much more probable that they act on the nervous system of life than on that of mind—namely, on the branches of the great Sympathetic. It is certain that this system, which has its centres in the trunk of the body, sends branches out of it, which accompany all the great vessels, and which may be easily seen on the external iliac arteries, where they become femoral. The necessity for such accompaniment, he observes, is rendered remarkably evident by branches from that nerve ascending from the trunk even to the brain, from which organ it is obvious, that, if a cerebral nerve would have answered the purpose, it could far more easily have been supplied. But it is evident that the sympathetic and its branches are everywhere the nerves of life, having their centres in the trunk, as those of mind have them in the

head; that these branches, as they accompany the great trunks of the arteries, accompany also the minutest capillary arteries to every surface of the body; and that it is upon their extremities, if upon any nerves, that the homœopathic doses make those impressions of which, like all the acts of the vital system, we are necessarily unconscious."—"After all, I am disposed to think that minute doses act generally through the absorbents."

The principle, say the congress, "of suffering a remedy to act as long as its benefit is sustained, is good and reasonable in itself; but, to fix its duration precisely, to assign the number of days during which it will continue to act, is absolutely contrary to daily experience, which shows us how much the duration of the effect of a remedy depends on the largeness of the dose, the kind of disease, and the idiosyncrasy of the patient."

"That which Hahnemann says on the duration of the action of medicines," Griesselich and Schroen had previously observed, "has but very limited practical value. — As each organism requires impressions of different intensity to be affected by them, so also it requires that the intervals between the impressions should vary."

"In order that the appropriate dose of the well chosen medicine should display its efficacy properly, it is necessary," say the Congress, "that the patient should observe a conduct corresponding. Physical and moral regimen are the allies of the appropriate medicine both as to quality and to quantity.

"It is not sufficient for the cure, to administer the medicines. The physician ought to be careful to remove all that might interfere with them, and to place the patient in such conditions that we may have reason to believe that the medicine will act. It is often in this alone that medicine consists. It is to the honour of homœopathy to have enforced this upon the attention of physicians."

SECTION XI.

SUMMARY OF PRECEDING PRINCIPLES,

BEING A

SKETCH OF THE NATURAL SYSTEM OF MEDICINE.

ANATOMY is the basis of physiology; and physiology, the basis of pathology. The *natural classification* in the first of these sciences, is strictly applicable to the other two. That classification expresses the relations existing between the sciences themselves, as well as the relations of their parts to each other. Without a systematic knowledge of these relations, there can be no accurate reasoning in any one of these sciences.

What is true of these sciences generally, is true of their parts, under whatever aspect they are viewed. Thus, in natural pathology, *the classes, orders and genera of disease* correspond precisely to the classes, orders and genera of organs and functions. And, as such classification necessarily indicates, in each disease, the function primarily deranged, as well as the

mode of derangement, it indicates also the treatment.

But to attain the knowledge of individual diseases, which enables us thus to class them and indicate their treatment, *the intimate nature of each disease* must be understood. The nature of disease consists in a change of the healthy state and action of parts —often of minute organization and proportionally obscure function; and, until this is known in each disease, the treatment of it must be unscientific, and liable to all the errors of empiricism; for "similar symptoms (hitherto observed with too little discrimination) may be the reflexion of different diseases."

Already the intimate nature of disease is known to us in many cases. Discriminate observation of *the symptoms of each disease*, with all the aid of improved anatomy, physiology and pathology, will explain it in the rest.

In every disease, there are *two kinds of symptoms, morbid and curative:*—the former being the signs of the disease; the latter, the signs of natural reaction or of the vis medicatrix naturæ; and these two kinds of symptoms are directly and utterly opposed to each other.

In every disease, consequently, the chief duty of the physician is *the distinction of the morbid from the curative symptoms* — a task less difficult than its past neglect by all parties would lead us to imagine.

The next duty of the physician is the prescription

of simple *remedies, of which the effects* (as proved by experiments) *are respectively contrary to the morbid symptoms, and similar to the curative symptoms.* From the neglect of this distinction, a frightful proportion of the sufferings of mankind from disease and its treatment has originated.

Antipathy, from *ἀντὶ against* and *πάθος disease*—or Alexipathy, from *ἀλέξειν to drive away* and *πάθος*, —is evidently the proper name of that great branch of the common practice which attacks disease itself or its morbid symptoms.—Homœopathy, from *ὅμοιος similar* and *πάθος*, is certainly a name as appropriate to that modern practice which every where declares that it imitates the ensemble or totality of the symptoms, and therefore the morbid symptoms—the disease. But as, in reality, the imitation of the morbid symptoms, the disease, is an egregious error, and it is the curative symptoms alone which should be imitated or aided, the term homœopathy is quite inapplicable to the subordinate branch of the common practice which so aids the curative symptoms. It is equally inapplicable even to the practice called homœopathic, *in so far* as that practice does not excite pathic or morbid symptoms, but only aids the vis medicatrix naturæ. The proper name of that branch therefore is the Symphysic, from *σὺν with* and *φύσις nature*,—or Opheliphysic, from *ὠφελεῖν to assist* and *φύσις nature.*

"Contraria contrariis curentur" is *the law for the*

treatment of morbid symptoms, to which no other law can possibly apply; and, though often abused, it is applied equally in the common practice and in homœopathy. This law is the first to be acted upon; because, as observed even by Hahnemann and the Homœopathic Congress, "the removal of the remote or real cause, may alone cure the disease."

This law demands the prescription of *doses relatively large*—large compared with those which would aid the curative symptoms; for, according to the quantity or power of the cause, must be the quantity or power of the antidote.

"Similia similibus curentur" is *the law for the treatment of curative symptoms*, occasionally and indistinctly acted upon in common practice, but constituting the sole recognized and too exclusive basis of homœopathy, which acts upon it as perfectly as is permitted by the fatal error of not distinguishing between morbid and curative symptoms.

This law demands the prescription of *doses comparatively minute;* because the medicaments prescribed under it are such as act in harmony with, and have only to come in aid of, the efforts of nature—the curative symptoms—the power of which, unaided, is often sufficient for the cure.*

* The law, thus explained by its application only to curative symptoms, in its turn explains, not only *the theory of minute doses*, but the sudden *transitions to health without exacerbation*, which should arise from medicines exciting similar disease, new and artificial

Pain is an act of the nervous system, the outcry of life when suffering under morbid symptoms, and the portion of the vis medicatrix naturæ exciting to the production of curative symptoms. Pain is therefore *the means of distinguishing morbid from curative symptoms.*

Gentle reaction, slight injection, or incipient inflammation, is the consequence of pain, the reaction of the vital system, *the instrument of the vis medicatrix naturæ, in the cure of disease.*

Medicines being perfectly simple, and their power being determined by their effects on persons in health as well as in disease, their *administration* will follow as far as possible the order of phenomena.

Where the cause and morbid symptoms can be at once removed, the law contraria will be acted upon, as in taking a thorn from the flesh, adding an alkaline antidote to a metallic poison, &c., and the law similia may not be acted upon at all.

Where the morbid and the curative symptoms follow in successive stages, the morbid symptoms will first be attacked by the law contraria, and then the curative will be guided by the law similia, as in the cold and the hot fit of fever.

Where the same medicament at once attacks the morbid, and aids the curative symptoms, both laws

reaction, &c.,—the phenomena of *isopathy and inoculation,—the action of small doses*, where strong ones are effective, — *the absence of injury from large doses.*

will at once be acted upon, as by at once removing the irritating matter and aiding the ejection in diarrhœa.

Thus the law contraria may be acted upon singly; or both laws in succession; or both laws at the same time and by a single medicament.

The *doses* of medicines ought to be regulated by their intended application to the morbid or to the curative symptoms respectively.

The reader has thus seen that both the common and the homœopathic notions as to *first principles*, anatomical, physiological and pathological, are vague and inaccurate.

Briefly stated, the characteristics of this work, which is intended to remedy that vagueness and inaccuracy, have been:—the general classification of the organs, functions and diseases of the human body, in strict conformity with their natural relations, in groups of perfectly homogeneous character, and in the order of their dependence; — the view of the nature of disease, as essential to such classification;—the distinction of symptoms resulting from their nature, as of two kinds, morbid and curative; — the application of the aphorism "contraria" and of antipathic medicaments to the treatment exclusively of morbid symptoms;—the application of the aphorism "similia" and of symphysic or opheliphysic medicaments to the treatment exclusively of curative symptoms; — the consequent and distinct

appropriation of large doses to the former and of minute doses to the latter;—the showing that pain is the means of distinguishing morbid from curative symptoms;—the indicating incipient inflammation as the instrument of the vis medicatrix naturæ in the cure of disease; — the general indication of the preference or succession of these medicines in relation to the symptoms and the laws by which they must be guided; — the pointing out the principle regulating the dose of medicines.

I have especially endeavoured to show the truth of both of the two laws, which have hitherto been considered contradictory, and of which it was thought that one at least must be false, as well as to show the precise and definite application of those two laws each of which has hitherto been supposed to be universal and exclusive.

The homœopathist, in *the greater law* "contraria contrariis curentur," has much to receive, even if we knew less than we do of the causes or nature of disease, to which alone that law applies: — indeed, at this moment he unconsciously uses it, and, where he does so, such is its value, that he founds upon it his very first operations in the cure of disease! Without it, in innumerable cases, the rule "similia" would be acted upon in vain.

The regular practitioner, on the other hand, has to receive, more extensively and accurately, *the minor law* "similia similibus curentur"—a law of immense

importance, though as yet of imperfect* application, —which already, in some cases, he indiscriminatingly employs. The treatment founded on this law has much to recommend it on the score of humanity, since, the moment it comes into application, minute doses are substituted for monstrous and disgusting ones; and, in many instances, for painful and dangerous operations. Assuredly, the more medicine advances in real improvement, the more will the operations of surgery diminish.†—Without this rule,

* Imperfect it always must be till, as already shown, curative can clearly be distinguished from morbid symptoms.

† An old professor of surgery, we are told, at the university of Würtzburgh, entertained the highest opinion of his art. Every time a stranger of celebrity visited his hospital, he did the honours by an operation, as, on other occasions, they are done to distinguished strangers by the discharge of cannon. He accordingly reviewed the patients of the hospital, and quietly marked out such a victim, as seemed to be an object for an interesting operation. The unhappy creature, to whom a word had never before been spoken of any operation, and who, a few minutes before, entertained in most cases well-founded hopes of being cured without the knife, was then put on the table. Every act of the operation was followed by an interlude, during which the professor, notwithstanding the heart-rending cries of the victim, very quietly took a pinch of snuff, put his laced ruffles in order, gave explanation to the stranger about the case, his method of operating, his instruments, &c. Then he commenced again, and, after long proceeding in this way, the operation at length finished.—It is stated, that as often as the patients saw a stranger enter the hall, their faces exhibited extreme anxiety, and it frequently happened, that, at those moments, some attempted to escape.

Surgery, say Griesselich and Schroen, "ought not to seek for honour in the great number of operations performed, and in the ability

in innumerable cases, the law "contraria" would be acted upon in vain.

The union and proper application of both laws, the less as well as the greater, which are thus but portions of one system, will evidently ensure, to a greater extent than hitherto, the cure of diseases. All that is required is, that the practitioner should distinguish the symptoms to which the laws are respectively applicable.

I need not say how different this union, in which one law is applied to the morbid, and the other to the curative, symptoms, is from the unprincipled and injurious practising, at the choice of the patient, of either method, the common or the homœopathic, in their present opposed and exclusive state; for, in that case, antipathic medicaments are injuriously opposed to curative symptoms, and homœopathic methods are idly opposed to morbid symptoms.

Nor is it necessary to recommend to medical men such unity of procedure; its realization is inseparable from the progress of knowledge; and those alone will be the sufferers who neglect speedily to profit by it. He who rejects either principle, as rationally defined and rectified, does so at his peril. He declares that he will practise only one portion of

of managing the knife, but in the talent to render such operations uncalled for by the internal and external employment of medicaments." —"The treatment of surgical diseases by specific medicaments has already rendered all operation unnecessary in certain cases."

medicine — or rather that he will attempt to cure only one series of symptoms, while he exasperates the other.

Those who think that their caprice may with impunity be indulged in matters of such vast magnitude, ought to be reminded of the remark of Ancillon, that "nobody has a right to disturb, to paralyse, to impede the intellectual march of mankind. Happily, if any one were disposed to do so, his malignity would at length be powerless. The feeble arm of man cannot long counteract the laws of nature, nor overthrow the order of the universe. Man may effect much, if he confine himself to its eternal track; but, if he endeavour to give it a retrograde motion, he is seized, hurried away, and crushed by the vast wheel of time."

It is more generally death that cures these ills. Such, indeed, beneficently for the species, is its use: men expire with all their prejudices and incapacities to advance; and the successors to their knowledge add also new power of improvement.

THE END.

London:
Printed by STEWART and MURRAY, Old Bailey.

MR. WALKER'S

ANTHROPOLOGICAL WORKS.

I.

DOCUMENTS AND DATES OF MODERN DISCOVERIES IN THE NERVOUS SYSTEM.

FROM THE SPECTATOR.*

"THE volume is essential to any one who wishes to investigate the subject.—We see Sir C. Bell tacitly countenancing for a long time the mistatement of Shaw and others, by which the appearance of his essay on the Brain was carried back from 1811 to 1809,† the period of Mr. Walker's publications; and a paper published before Magendie's experiments, has been *silently* altered since.—So it is 'grand anatomiste, grand voleur!'"—In the following No., the Spectator says, "That the phrase *grand anatomiste, grand voleur* was equally applied to Bell, Magendie and Mayo, as indicating plagiarism."

II.

THE NERVOUS SYSTEM, ANATOMICAL AND PHYSIOLOGICAL;

In which the Functions of the Various Parts of the Brain are for the first Time assigned; and to which is prefixed some Account of the Author's earliest Discoveries, of which the more recent Doctrine of Bell, Magendie, &c., is shown to be at once a Plagiarism, an Inversion, and a Blunder, associated with useless Experiments, which they have neither understood nor explained.

In the "Report presented to the British Association assembled at Cambridge in 1833," Dr. Henry designates a very small portion of the discoveries described in this work (and which are here shown to have been made exclusively by its author) as "*doubtless the most important accession to physiological knowledge since the time of Harvey.*"

---

* 21, September, 1839.

† It was printed by Mr. Strahan; and, from the Account Books of his Office, it appears that this was done in August, 1811.

The author of this book, long before the publications of M. Magendie and Sir C. Bell, originated the great modern discoveries in the Nervous System. In 1809, he endeavoured to show that the *anterior* roots of the spinal nerves, the *anterior* columns of the spinal marrow, and the *anterior* masses of the brain, were those of *sensation*, and that the *posterior* masses of the brain, the *posterior* columns of the spinal marrow, and the *posterior* roots of the spinal nerves, were connected with *loco-motion*.

By Dr. Fletcher, in his "Rudiments of Physiology," this work is much quoted as AN AUTHORITY as to the points of structure which he considers.

Its opinions, as to REASONING IN PHYSIOLOGY, are, in some instances, made the subjects of extended comment and enforcement by that writer.

Dr. F. also mentions "Walker, Rolando and Flourens" in the order of actual precedence in the discovery of the functions of THE CEREBEL AS THE ORGAN OF THE WILL—a discovery (first published by Mr. Walker in 1808) which, as it also more clearly determines the naturally *preceding* functions of the cerebrum, is perhaps the largest and most fundamental advance ever made in the nervous system.*

As to "THE PLURALITY OF THE NERVOUS SYSTEM," as Dr. F. calls it, he, in justice, places "Walker" before "Bellingeri, Bell, Magendie, Mayo, Earle, Arnold and other contemporary authors, to whom," he observes, "we are indebted for almost all that has been established on the subject."—He truly states the case between these opposed parties as TO THE PARTS SUBSERVIENT TO SENSATION AND THOSE SUBSERVIENT TO MOTION, in saying, "Mr. Walker regards the anterior roots of the spinal nerves as *sensiferous* and the posterior as *motiferous*, ministering at once to involuntary motion, by means of the filaments derived from the lateral or olivary columns, and to voluntary motion, by means of those derived from the proper posterior or cerebellic columns: on the other hand, Sir C. Bell, Mayo, Earle, Arnold, &c. *inverting*, as Mr. Walker says, *his* doctrine, represent the former as *motiferous*, and the latter as *sensiferous*."

He quotes, from the work whose title is the heading of this notice (published in 1834), Mr. Walker's general doctrine as to THE CIRCULATION OF THE NERVOUS SYSTEM, — though he might have quoted it either from "Archives of Science," published in 1809, or from "Thompson's Annals of Philosophy," for 1815—the latter preceding Mr. Earle's pub-

---

* The objections stated, in the most philosophical and liberal spirit, by Dr. Fleming, in his "Philosophy of Natural History," against this doctrine of Mr. Walker — that the cerebel is the organ of volition, have been fully replied to in this work on "The Nervous System."

lication in 1833 by eighteen years, and the former preceding it by twenty-four years!

Burdach, quoted by Seubert, makes a similar representation. In his work, "De Functionibus radicum anteriorum et posteriorum Nervorum Spinalium Commentatio a gratioso medicorum ordine in literarum Universitate Heidelbergensi Praemio ornata, Quam Scripsit Maximil. Carol. Guil. Seubert, Med. Chir. et Art. Obstet. Doctor," he says, "Burdachius complures jam annos ante Gallorum examina utramque et columnam et radicem medullae spinalis, licet proprietatem cujusque explicatius non segregaverit, ministeriis tamen differre ingeniose conjecit.*

"Sed rationes, quas ex analogia deduxit, opinionem nostrae experimentis comprobatae oppositam ei adsciverunt, qui probare studuit, in anterioribus medullae partibus potius sensibilitatem, posterioribus irritabilitatem praevalere.

"Eandem opinionem etiam Crossius et Walkerus† professos esse edocet.

In this last respect, Burdach errs. Dr. Cross makes no such distinction, and is merely quoted, in Thomson's Annals, by Mr. Walker.

Dr. Fletcher, however, does an injury to Mr. Walker when, in defence of Messrs. Bell and Magendie against Mr. Walker's accusation of plagiarism, he says, "When the term plagiarism comes to signify, in many respects, the flattest possible contradiction, then, and not till then, can Bell, Magendie, Bellingeri and Walker be fairly accused of having been guilty of it with respect to each other."

Mr. Walker has never accused Bellingeri of any such injury; but both Mr. Walker and Bellingeri had good reason to accuse Sir C. Bell of committing it in the most shameful manner, as irrefragably proved, in regard to the latter, by the editor of the Edinburgh Medical and Surgical Journal: though, in reprobation of such dishonourable conduct, Bellingeri himself has only said, "Onde desidererei, che almeno in avvenire l'Inglese *Carlo Bell* ed annunziasse ciò che è suo, che pure ha molto di buono, ed indicasse quello che spetta all' Italiano *Carlo Bellingeri,* che pubblicò il suo scritto molti anni prima de' suoi."‡

But Dr. Fletcher states not the case justly in respect to Mr. Walker, when he asserts that there is the flattest possible contradiction between the two doctrines.

As to the general doctrine—the great and fundamental truth, that the roots of the spinal nerves and the spinal columns are those respectively of sensation and volition, without regard to

---

* Burdach, Bau und Leben des Gehirns, &c., t. i. p. 134.

† Thomson's Annals of Philosophy, 1815.—*Of course, before Burdach himself!*

‡ Storia di Nevralgia Sopra-orbitale. Bologna, 1834.

peculiar appropriation,—instead of there existing the flattest possible contradiction between Mr. Walker and those who have followed him, there is not even the slightest difference between them: they thus far implicitly adopt his general doctrine—*his* doctrine, because it was never before suggested as to these roots and columns. As, then, this fundamental truth was most distinctly stated by Mr. Walker in Archives of Science for July 1809, and the dissections on which it was founded were made so far back as 1807, as publicly certified by Professor Lizars, then his assistant,—as the subject was not at all touched by Sir C. Bell till 1811, as he himself acknowledges, when, in a pamphlet privately printed and circulated, he ascribed both sensation and motion to the anterior roots of the spinal nerves!—and as he did not more fully state the doctrine till many years afterwards, when Mr. Walker had again published it in Thompson's Annals of Philosophy,—Mr. Walker's long precedence and Sir C. Bell's final PLAGIARISM of the *general doctrine* are quite indisputable.

Accordingly, says Professor Whewell, "Sir Charles Bell appears at first to have pursued his researches with reference not to this distinction, but to others. In his Idea of a new Anatomy of the Brain (1811), he endeavoured to establish the opinion that different endowments are in the same cord of the spinal nerves, and held by the same sheath; and the nature of this difference was, that both sensation and volition belonged to the anterior origin of the nerves, and another function to the posterior origin.

"Yet, along with this, he appears to have entertained, as a conjecture, the doctrine now in question. For in a letter written by him, and published in Dr. Cook's work on Palsy (vol. ii. pt. 1, p. 57, 1821), he says, 'the nerves of sensation and motion are bound together in the same membranes for convenience of distribution, but there is reason to conclude they are distinct throughout their whole course.'

"But notwithstanding this conjecture, in his Memoirs of 1821 and 1822, the reference of his researches is not to this difference, of sensation and motion, but to another view, resembling his original one. His main point in these memoirs is, that certain nerves are nerves of sensation and volition, and that certain others are, 'respiratory nerves.' Thus, Phil. Trans. 1821, p. 417, 'the fifth nerve, the nerve of mastication and sensation;' in 1822, p. 310, 'this (the respiratory) system of nerves is superadded to that of mere feeling and agency.'"

In a review of "The Nervous system, Anatomical and Physiological, by Alexander Walker," "Documents and Dates of Modern Discoveries in the Nervous System, by the same," "Narrative of the Discoveries of Sir C. Bell in the Nervous System, by Alexander Shaw," and "Outlines

of Human Physiology, by Herbert Mayo," *The Lancet*, in its Number for 25 April, 1840, says "No small share of glory is attached to any important discovery in the nervous system. — A great victory had been won when it was established that 'the functions of nerves correspond with their roots;' that 'in the same nervous trunk there are often two distinct nerves of motion and sensation;' and, finally, that 'the anterior columns of the spinal marrow are for motion, the posterior for sensation.' [Mr. Walker has always stated the reverse of this latter point.]

"The claimants to the honour of these discoveries have been numerous, but four alone now remain: they are, on the one side, Bell and Magendie; on the other, Walker and Mayo. The claims of the different parties are fully set forth in the works whose titles are prefixed to the present article; but we have not thought it right to hazard a judgment upon the testimony of witnesses, some of whom are prejudiced, others (we had almost said) perjured. The question, then, to which we shall confine ourselves is—'To whom are we indebted for the discovery of the fact, that the nerves which proceed from the spinal marrow are endowed with the functions of sensation and motion, in consequence of their being connected, by distinct roots with the anterior (motor) and posterior (sentient) columns of the cord?'

"The most impartial mode of arriving at a solution of this question is to analyse, in chronological order, the opinions which have been successively published by Mr. Walker, Sir Charles Bell (and Mr. Shaw), M. Magendie, and Mr. Mayo.

"The first papers, in point of date, are those of Mr. Alexander Walker, published in the 'Archives of Universal Science,' 1809. Mr. Walker here clearly announces that 'as, in some cases, sensation exists without volition, and as almost all nerves arise by distinct filaments, whenever a part, having both sensation and motion, is supplied from one nervous trunk, that trunk envelopes both a nerve of sensation and one of volition.'

"Again, reflecting on the arrangement of the fibres of the brain and spinal marrow, and also on the fact that sensation ascends to the brain, while volition descends from it, Mr. Walker concludes 'that the anterior fasciculi of the spinal nerves are nerves of sensation, and the posterior fasciculi, nerves of volition' (motion); because it does not accord with the distinctness of natural operations to suppose that these motions, in opposite directions, take place through one and the same series of nerves.

"In 1815, Mr. Walker lays down these two principles more distinctly, and concludes 'that nerves of sensation arise in the organs of sense, and, by means of the anterior fibrils, terminate in the anterior columns of the spinal marrow. — That those nerves of volition (motion) which do not arise directly from the cerebellum, spring from the posterior columns of the spinal marrow by means of the posterior fibrils.'

"Previously to the year 1822, Sir C. Bell published three memoirs, or papers, on the nervous system; viz., "The Idea of a New Anatomy of the Brain," in 1811; a paper on the nerves of respiration, in the Philosophical Transactions," July, 1821; and another paper, on the same subject, in May, 1822. — It is a curious circumstance, and one which we cannot avoid noticing at the outset of our remarks, that in no part of these three memoirs do we find the discovery of the motor and the sensitive columns of the spinal marrow, or of the corresponding functions of the spinal nerves, distinctly announced by Sir C. Bell."

It is only as to THE SUBORDINATE APPROPRIATION OF CERTAIN OF THESE FUNCTIONS TO CERTAIN OF THESE PARTS, that any difference exists between Mr. Walker and Sir C. Bell, Mr. Magendie, &c.; Mr. Walker having, in Archives of Science for July 1809, and again in Thompson's Annals of Philosophy for August 1815, ascribed sensation to the anterior nerves and columns, and volition to the posterior columns and nerves, while it was not till fifteen years after the first of these publications, and nine years after the second, namely, 1824, that Sir C. Bell at last *followed* M. Magendie, who, two years before, namely, in 1822, had ascribed volition to the anterior nerves and columns, and sensation to the posterior columns and nerves, thus making a mere INVERSION of Mr. Walker's doctrine.

EVEN THIS INVERSION ORIGINATES IN A GROSS AND PALPABLE ERROR. Messrs. Magendie and Bell found that, on irritating the anterior roots and columns, motion instantly ensued, and they erroneously concluded that these nerves and columns are those of motion. They forgot that there is no motion in animal bodies, without previous sensation—that their irritation could have led to no motion, unless they had been nerves and columns of sensation. They neglected also all analogies; of which we may here take one of the simplest. The skin is supplied with nerves of sensation, which enable it to feel; the muscles, with nerves of volition, which enable them to act. Now, if any one prick the skin on the tip of a finger, motion instantly ensues. Messrs. Magendie and Bell ought here, as in the former case, to conclude that the nerves at the tips of the fingers must be nerves of volition! Of this, however, they would be ashamed; and they would readily acknowledge that motion here ensues only because painful sensation precedes. Why, then, do they not see that, in irritating nerves which are only nearer to the anterior columns of the spinal cord than those at the tips of the fingers are, sensation must similarly precede motion, and that they are there, as well as at the tips of the fingers, mere nerves of sensation? As to the irritation of the posterior columns and roots, or those of volition, producing no motion, it is enough to observe, that we can simulate sensation by means of irrita-

tion; but we have no means of simulating volition; and therefore no motion ensues when the posterior gangliated columns and nerves, or those of volition, are irritated. Thus this inversion of Mr. Walker's doctrine only puts on record an egregious BLUNDER of Messrs. Magendie and Bell.

As some pretended to found their observations upon experiments — on Müller's experiments on frogs, Mr. Walker was induced to reply to such experiments in the following letter addressed to Dr. Marshall Hall, for the purpose of showing that experiment without reasoning is worthless.

"Dear Sir, *London.* 1, *July*, 1839.

"As I have mentioned to various persons the chief grounds on which I reply to the superficial and erroneous conclusions drawn from Müller's experiments on frogs, your taking, in my behalf, a note of the date of my late verbal communication to you (on the 29th of June) would perhaps secure my claims in that respect. My statements were: that these people have never enquired even 'on what they were experimenting;' that a pure nerve of sensation and a pure nerve of volition being diametrically opposed in function, must, under irritation, give different, nay opposite, reports; that the perfectly similar results produced by irritation of the anterior and of the posterior roots of the spinal nerves in animals below, as well as in animals above, frogs,* must arise, not from that which is different, but from that which is similar, in the organization of these roots—their being both accompanied by ganglionic nerves; that the result of such irritation accordingly is the perception of pain—the sense of the ganglionic or vital system, and not the perception of form by the sense of touch which belongs to the mental system, as shown in my work intitled 'The Nervous System;' that they confound together functions as well as parts which are totally different in their nature; that the functions of the nervous system must be investigated, not by experiments on complex parts, scorning even to take the slightest cognizance of such complexity—a procedure how unworthy of our age! but by minutely tracing the healthy structure as Reil has done, by watching its genetic development as Tiedemann and Burdach have done, by observing minutely and reasoning accurately respecting whatever can be observed of its functions both in health and disease, &c. &c. &c.

"I am, dear Sir, most sincerely yours,

"Alexander Walker."

"To Marshall Hall, Esq., M. D."

---

* And how anomalous *their* nervous structure, Volkmann has shown in his Paper on the Fibres of the Spinal Marrow and Sympathetic Nerve in the Rana Esculenta.

As to all experiments, Mr. Walker has *elsewhere* shown, it should be remembered that, in the higher encephalic organs, in particular, no voluntary action can be excited at all: force and spontaneity or will are absolutely incompatible. All irritation, therefore, to compel any act of volition, implies an absurdity; it cannot naturally have any result. This places the first of these classes of organs completely above our reach in experiment.

But the spinal intermediate or alternating organs are only the complement of the voluntary ones, assuming and resigning their functions at bidding, and always deriving from them their principal impulses — their silent guidance: these two classes of organs therefore go together, equally exempt from direct and immediate artificial excitement.

The lower, ganglionic or vital organs may be supposed to be more easily excited to natural action; but their natural excitements are very different from artificial ones—they neither destroy continuity, nor empty the vessels to be actuated. In all irritations, therefore, even of the lowest and most manageable of these systems, every thing may be forced, perturbed, retrograde — nothing natural, or affording natural conclusion.

It must absolutely be on the lowest class of nervous organs alone that all artificial irritation and experiment is directly made.

The ascription of sensitive functions to one of the two series — to the anterior, or to the posterior series, of cerebral masses, columns of spinal marrow, and nerves attached to them, — the ascription of voluntary functions to the remaining series of cerebral masses, spinal columns and attached nerves, — and a connection through the brain and cerebellum between the anterior and the posterior of these series, forming thereby a circle of nervous action and influence, is the conception of recent times.

The precise direction or course of this action, — whether from the anterior to the posterior series, or vice versa — whether from before backward, or from behind forward,—has been the great subject of doubt.

This, it was thought, might be determined by experiment. For that purpose, the roots, anterior and posterior, of the spinal nerves, seeing that these were then deemed either purely sensitive or purely motive, were thought to be the only parts at which we could hope that artificial irritations might produce successful results—decisive evidence of the direction and course of the mental functions.

Accordingly, after many experiments on the higher animals, then thought doubtful, such results were, a few years ago, supposed by perhaps the greater number of physiologists, to be yielded by Müller's experiments on frogs, which seemed to indicate motion to be the function of the anterior parts, and sensation to be the function of the posterior ones.

Even *then*, however, it was not forgotten, that the first experiments of Magendie had exhibited motion as the result of irritating either anterior or posterior parts in the HIGHER ANIMALS. *Now*, other circumstances, causing further indecision and doubt, have arisen: the experiments of Hall have proved that motion is produced by irritating either root in in LOWER ANIMALS,—turtles and rays. Thus, strangely, is one and the same effect produced by irritating parts which must be directly opposed in function!

Finally, the circumstances in the structure of frogs pointed out by Volkmann (an anomalous distribution of ganglia and ganglionic fibrils upon the precise parts which are the subjects of experiment), must, in all experiments on those animals, have been attended by demonstrations only of correspondingly anomalous, instead of regular function.

In frogs, says Volkmann, "the ganglia, through which the union of both nerves (the sensitive and motor) is effected, do not belong so entirely to the sensitive root as in the mammalia. In the fourth spinal nerve, the ganglion appears to be equally divided between the two roots. In the fifth, although the motor branch passes by the side of the ganglion, still examination with the microscope convinces me that some of its filaments pass through it. The tenth nerve has only one root, which is furnished with a ganglion at its point of exit from the canal.

Under these circumstances of indecision and doubt as to past experiments—of parts *different* in nature manifesting *similar* results, is this fundamental question again thrown open to discussion.

If, from experiment, we recur to reasoning, it certainly seems impossible that mental nerves, pure nerves of sensation on one hand, and pure nerves of volition on the other—nerves directly opposed in their nature, as the spinal roots are thus supposed to be, should, on irritation, yield results which are more or less similar, instead of being precisely opposite.

This brings to recollection, that both roots are covered by similar ganglionic or vital fibrils; and it suggests the not illogical conclusion that that which is similar in the result of these experiments, must be owing, not to that which is different or opposite in the nature of the mental roots themselves, but to that which is similar in the nature of the vital fibrils with which both roots are covered.

The character, too, of the motions occasioned by such experiments, appears in no way to resemble that of the calm and deliberate acts induced by impressions on the organ of touch, or of the other mental senses, but that of the involuntary and irresistible spasm or shiver which is always compelled by injury inflicted on the vital nerves, and by the pain which is the outcry of that system when suffering.

It seems not improbable, therefore, that the immediate subject of these experiments has not hitherto been understood; and that, while they have been supposed to be made on the higher, or mental nerves, they have in reality been made on the lower, ganglionic or vital ones, which invest them.

Unfortunately, these roots are not only undeniably complicated, but it seems quite impossible to separate them into their pure and simple constituent parts—mental roots and ganglionic fibrils — so as to derive from them any satisfactory information by experiment. The law by which nature denies manifestations of sensibility to irritation of the first expansions of the organs of sense, as well as of the brain itself, thus guarding their acts from disturbance, appears to be extended to the least impure of the nerves arising from the spinal marrow. To the interrogation of experiment, we receive from these roots no reply: we hear only the language of the vital nervous system in the expression of pain. Moreover, no cerebral nerve can be proved to be perfectly analogous to any spinal one, and none are much less complicated with ganglionic fibrils.

Seubert says "Non possum non citare experimentum a Burdachio cum Professore de Baer institutum, quod his enarravit verbis:* "Wir durchschnitten die vorderen Wurzeln der rechten Schenkelnerven, der rechte Schenkel verlor auf der Stelle alle Turgescenz, wurde welk, unempfindlich, unbeweglich; der Frosch sprang mit dem linken Hinterfüsse. Wir durchschnitten ihm hier die hintern Wurzeln der linken Schenkelnerven, und sogleich war der linke Schenkel ebenso gelähmt, als der rechte; der Frosch schob sich mit den Vorderfüssen fort und schleppte die todten Hinterfüsse wie etwas Fremdes nach. Wir armirten hierauf das Rückenmark mit dem positiven, beide Schenkel mit dem negativen Pol einer galvanischen Säule, und es erfolgten in beiden Schenkeln Zuckungen, ohne dass man eine Verschiedenheit in ihnen wahrnehmen konnte.†

This is at variance with Müller's experiments. If there be no better remedy for such confusion, it would seem wise that, in order to unravel

---

* Burdach, lib. cit. tom. i. p. 262.

† "When we cut through the anterior roots of the nerves of the right leg, the right leg lost instantly all turgescence, became flaccid, insensible, motionless: the frog sprang with the left hind leg. We now cut through the posterior roots of the nerves of the left leg, and the left leg was immediately as lame as the right: the frog shoved himself forward with the forefeet and trailed the dead hindfeet after him like something that did not belong to him. Hereupon we armed the spinal-marrow with the positive pole, and both legs with the negative pole of a galvanic column, and convulsions followed in both legs, without its being possible to perceive a difference in them."

the difficulty, physiologists should now rather direct their attention to the structure and the connexion of the parts of the nervous system, to that dependance which such connexion in general very clearly indicates, to the genesis—the successive growth and relative development of parts, to the influences which these point out, and to the beautiful revelations of comparative anatomy.

The chief remaining question between these two parties will be decided whenever it is determined—whether motion, which is natural and not retrograde, must always have its whole appropriate course, — or, in other words, whether motion communicated through descending motory nerves, must, when not retrograde, be always preceded by sensation or irritation excited through ascending sensatory nerves, — and whether, when not so preceded, it is not always forced and retrograde action.

Mr. Walker's Papers, then, whether they be right or wrong as to function—direction or course, are certainly those of by far the earliest writer who speaks of nerves, spinal columns, and cerebral masses of sensation, — of the continuation of the action thence originating through the cerebrum, — and of other cerebral masses, spinal columns, and nerves of volition, — thus forming the great circle of nervous action and influence. This appears to be, at least, the first part of the discovery, "the conception or idea," as described by Professor Whewell.*

Here, however, are subjoined the Reports of Two Pathological Cases, which decidedly prove that Mr. Walker was right in the doctrine first published by him thirty-two years ago, and that M. Magendie and Sir C. Bell were wrong in afterwards inverting it.—These cases are reported by Mr. Stanley and Dr. Budd — men as distinguished and honourable as any in the profession of medicine.

FIRST CASE.

"Royal Medical and Chirurgical Society. Tuesday, January 28, 1840.

"Sir B. C. Brodie, Bart., President.

"Case of Disease of the Posterior Columns of the Spinal Cord.

"By Edward Stanley, F.R.S., Surgeon to St. Bartholomew's Hospital.

"The author considers the case here related as worthy of being recorded, as a *well-marked example of disease strictly limited to the posterior columns of the cord.*

"The disease, which was not the result of any injury, commenced about

* "Confining myself to the discovery of the distinction of sensitive and motive nerves, I must remark that, according to the mode in which I have viewed all such events, the discovery consisted of two parts: the conception or idea, and the confirmation of this by facts."—Letter to the Editor of the Medical Gazette.

three years before the patient's admission into St. Bartholomew's Hospital, with *impaired motion* of the lower extremities, at first slight, but progressively increasing, so that at the time of his admission, he could only succeed, by a great effort, in raising his legs from the ground while sitting in a chair. Before the patient's death, the *inability of motion became complete* in each lower limb, in its whole extent. *In no part, however, was there any defect of sensation* confessed by the patient, whether the skin was scratched, pricked, or pinched. On dissection after death, no signs of disease presented themselves, except in the spinal cord. Here, contrary to the anticipations of the many persons who saw the case (and much interest was excited with reference to it) *no disease whatever was found in the anterior columns of the cord.* AN EXTENSIVE CHANGE OF STRUCTURE AND COLOUR WAS, ON THE CONTRARY, MANIFEST IN THE POSTERIOR COLUMNS FROM THE PONS TO THE LOWER END OF THE CORD. 'The value of the case,' says the author, 'consists in *the distinctness of its phenomena being acknowledged by many competent observers* to have been such as they are here recorded.'

"Dr. Budd remarked that *the case related contained facts which were directly opposed to the generally received opinion, that the sensitive nerves came off from the posterior columns of the spinal marrow, and the motive from the anterior columns.* He had a case under his care which bore upon this point. A man was admitted into the Dreadnought with posterior curvature. The dorsal vertebræ, from the fifth to the ninth, were carious. *There was complete loss of power in the lower extremities, while sensation was unimpaired.* He continued in this state until his death, when it was discovered that THE POSTERIOR COLUMNS OF THE SPINAL MARROW WERE NEARLY DIFFLUENT FROM DISORGANIZATION, *while the anterior columns were scarcely altered in structure.*

"Mr. Solly observed, that it was necessary, in examination of the spinal cord, to recollect the rapidity with which changes in its structure were effected after death!*

"Sir B. C. Brodie said, that where one part of the spinal column was *so much more altered in structure* than another, there must have been *a corresponding alteration before death.*

"Mr. Cæsar Hawkins inquired of Mr. Stanley whether, in the case related, there was any deficiency of *nutrition* in the lower extremities, and whether their temperature was altered!†

---

* This was meant as an escape from the very obvious consequences.

† In this inquiry, Mr. Hawkins, feeling that Sir Charles' hypothesis of *sensation* depending on the *posterior* columns was *gone*, evidently thought of supporting an old and absurd hypothesis of his, that both sensation

"Mr. Stanley replied, that there was *no difference either in the temperature or the nutrition* of the lower and upper parts of the body n the case he had detailed."

SECOND CASE.

From "Contributions to the Pathology of the Spinal Cord."
By William Budd, M.D.

Read, at a Meeting of the Medical and Chirurgical Society, Mar. 26, 1839.*

"Robert Holland, a sailor, aged 17, of florid complexion, and robust growth, healthy until his present illness, in August, 1837, received a severe blow on his back, from the boom of his ship, which did not, however, disable him: he continued his work as usual. From that time, he suffered occasional pain of the loins and weakness in the back, especially when stooping. This continued, without other complaint, until the beginning of December, when he began to experience *difficulty in running, and a sensation, when he attempted to run, as if his legs were tied:* he could still climb the rigging, and continued his usual work throughout that month. On the 1st of January, 1838, he was obliged to desist, on account of *increased impediment to the movements of his legs.* From the 1st to the 4th, he was still *able to walk, though with much difficulty: when he attempted to stoop he fell on his knees, and could not rise again* without the help of his hands. There was no weakness of the arms; and up to that time there had been no involuntary movements of the legs. On the 4th of January, he was *confined to bed on account of inability to stand, or to move his lower extremities.* On the 8th of January, he was admitted to the Seaman's Hospital: on admission, *his lower extremities were observed to be in extension and very rigid, with sensation unimpaired,* except slight numbness of the thighs. There was, for a few days after admission, difficulty of making water, which was passed with much straining. The tetanic condition of the lower extremities continued; and in the interval, between admission and the 11th of March, 1838, the state of the patient was as follows: —

"*Sensation in the lower extremities is unimpaired; and voluntary motion abolished in these limbs, which are rigid, from permanent contraction of the muscles.* The legs are sometimes extended, sometimes bent upon the thighs, and the transition from one condition to the other is quite involuntary. When these limbs are in extension, it requires great force to bend

---

and motion depended on the anterior columns, and nutrition on the posterior ones! — an hypothesis which he published two years at least after Mr. Walker had published the precise doctrine which these cases support.

* From the Medico-Chirurgical Transactions, vol. xxii.

them in the slightest degree; and when that force is withheld, they immediately return to their former position: the converse holds when the legs are flexed. *When any part of the skin of the lower extremities is pinched, the corresponding limb jumps with great vivacity*: if previously in extension, it momentarily assumes a state of flexion, and vice versâ. There is curvature of the spine, formed by prominence of the dorsal vertebræ, from the fourth to the ninth, inclusive. Motility and sensation are perfectly natural in all parts of the body, other than the lower extremities.

"In the beginning of April, profuse hœmoptysis took place, and was soon followed by other symptoms of phthisis; he was wasted rapidly, and died much emaciated, on the 3rd of May. His intellect had continued unimpaired; *the lower extremities were quite deprived of voluntary power, but with sensation unaffected;* and slight convulsions in the legs could be excited to the last.

"On examination, after death, the curvature of the back was found to be formed by prominence of the dorsal vertebræ, from the fifth to the ninth, inclusive, the 7th being the most prominent.

"The diameter of the cord was considerably smaller in the portion corresponding to the curvature, than in any other part throughout its whole length.

"The cord itself was of natural size; and A PORTION ABOUT TWO INCHES IN LENGTH, corresponding to the curvature, SOFTENED IN THE POSTERIOR COLUMNS. The tissue was not diffluent, but became flaky and partially dissolved, when a small and gentle current of water was poured on it. This did not happen when a like current was similarly directed on other portions of the cord. This *breaking down of the tissue was much more marked in the posterior than in the anterior columns, which were scarcely, if at all, softened, and resisted considerable traction.* After the arachnoid had been removed, the posterior columns had still sufficient consistence to retain their form.

"The affected portion was quite white, exhibiting no vascularity or bloody points. The nerves within the vertebral sheath, arising from the softened part, were firm and of natural appearance. The cord, above and below, was perfectly healthy, firm, and of good colour.

REMARK.—It is worthy of remark, that *the sensibility of the legs was unimpaired, although the posterior columns of the spinal cord were chiefly affected.*

That *physiologists*, as hinted in Advertisement and Introductory Remarks to "Documents and Dates," *know not even on what parts they*

have been experimenting! I see several begin to suspect this, though not one has yet acknowledged it! *They have been experimentally interrogating, not the columns of the spinal marrow and the roots of the spinal nerves, but the ganglionic nerves which cover them*, and they do not yet understand the responses given by these! They still confound PAIN, the sense of the vital, not of the mental, system, with TOUCH; and they cannot see that tremors, shiverings, &c., are the reply of the former, not of the latter, which yield no sign to irritation.

We have again seen that both columns and both roots, when irritated, cause more or less of motion, as shown by experiments on the higher animals before the French Institute (Magendie), and as evidenced in turtles and even in skates (Hall), though less apparent in frogs (Müller), probably in consequence of anomalous structure (Volkman).

Amidst the absence of all response from irritating the spinal columns and roots of nerves, it requires but little profundity of thought to see that the anterior columns, being the first completed (Tiedemann and Burdach), *must* be those of *sensation*, and that the posterior, being the last completed (Tiedemann and Burdach), *must* be those of *motion*; the first motions of the fœtus occurring when these columns cease to be open canals (Tiedmann, &c.) confirm this!

It requires no more profundity to see that the columns (still the anterior) which run up to the cerebrum or organ of the highest mental operation, *must* be those of *sensation* — the very *material* of such operation (for "nihil in intellectu quod non prius in sensu"), and that the posterior which descend from the cerebel, *must* be those of *motion*, for volition (not co-ordination, which is implied by volition, though M. Flourens does not see this) is the function of the cerebel.*

As little profundity does it require to see that, as motion ensues on the tip of a finger being pricked, and its nerves of sensation alone being wounded, so we must conclude that *sensation necessarily precedes motion*, and that when an anterior spinal root is pricked, it is precisely its being a nerve of sensation, covered by ganglionic nerves of analogous character, that is the cause of greater motion ensuing than when a posterior root is pricked.

Meanwhile I am amused (as much as one so far injured can be) with seeing writers contending for what belongs to none of them; and I rest

---

* How well this is illustrated by an experienced swimmer thrown into water exerting voluntary co-ordinated motions, and by one ignorant of that art exerting involuntary un-coordinated motions!

satisfied that there will arise some real thinker, possessing the mental independence, generosity and courage necessary to a declaration in behalf of justice.

III.

PHISIOGNOMY FOUNDED ON PHYSIOLOGY, and applied to various Countries, Professions, and Individuals. Illustrated by Engravings.

FROM THE MONTHLY MAGAZINE.

"This is, in many respects, a very *strange* composition — full of *new* and *recondite* knowledge, with remarks the most *poignant* that we have read for many a day. It is, in every respect, *a singularly valuable book.*"

FROM THE LITERARY GAZETTE.

"This is a very *curious* and very *acute* performance. The subject of inquiry is one of great, peculiar and general interest; and the author has displayed much *ingenuity* as well as *laborious investigation,* in the discussion. We cannot deny him the possession of high talents, and that his treatise is well calculated not only to teach us much, but to induce reflections and considerations upon all the important topics of which it treats."

FROM THE OBSERVER.

"Mr. Walker's reputation will be greatly extended by the volume before us. The system of Physiognomy he here developes is as *original* as it is *ingenious;* and the author brings much learning and philosophy to bear upon it. The work is certainly one which has the very strongest claims on the scientific and philosophical world. It is *a very masterly and interesting work.*"

FROM THE SUNDAY HERALD.

"There is more *originality* in this volume than we were prepared for: there is also more good sense and sound reflection than we expected to meet with in a work with this title. The volume is well written, replete with varied and *curious* investigations, very clearly conducted, and altogether *free from cant and empiricism.*"

FROM THE GLAMORGAN GAZETTE.

"This volume is a rich accession to our literature in every sense. The author comes to the performance of his work with qualifications of a high order, and has supported it with extensive philosophical research, and delightful attractions in illustrative anecdote. In a science peculiarly

calling into action imaginative powers, the author forms his inferences with great adherence to logical truth, and supports them with a copious store of learned and historical testimony."

IV.

BEAUTY; Illustrated chiefly by an Analysis and Classification of Beauty in Woman. With Drawings from Life by Henry Howard, Professor of Painting to the Royal Academy.

FROM A NOTE FROM MR. EASTLAKE TO THE AUTHOR.

"Mr. Eastlake, with compliments and renewed acknowledgements to Mr. Walker, can only express his admiration of, and general concurrence with, the interesting theories and facts, which are collected in his Analysis of Beauty. Every artist has reason to be indebted to Mr. Walker; but *the great feature of his work and that on which Mr. E. begs chiefly to congratulate him, is his having reduced the vague and uncertain notions of Beauty and Taste to the dominion of Reason.*"

13, Upper Fitzroy Street,
February 14, 1837.

FROM THE SPECTATOR.

"It is rather remarkable that an object of paramount interest and importance in the eyes of man, such as the female form is, should never have been treated philosophically and physiologically. No one, until now, has investigated the principles of beauty in the form of woman, in reference to its uses as an organic structure, and with a view to its influence on the individual and society. *To Alexander Walker belongs the merit of being the first to demonstrate, that beauty in woman is the outward visible denotement of sound structure and organic fitness; and of attempting its analysis and classification on physiological principles, with reference to its perpetuation in posterity.* We cannot follow Mr. Walker through his elaborate *refutation of the errors and sophistries of Burke, Payne Knight, and other writers on the philosophy of the beautiful.* Suffice it to say, that he demonstrates the fallacy of many of their arguments, by showing that they had not in view that there are different kinds or classes of beauty. On the characteristics of each of these kinds of beauty and stages of perfection, Mr. Walker descants with eloquent minuteness. The concluding chapter furnishes a clue to the observation of form in woman, through the concealment of drapery and the aids of dress."

FROM THE ATLAS.

"The study of the nude ought not to need defence. Not merely elevation, but delicacy of sentiment, is its natural result. It affords us pleasure to be able to say that, in the instance before us, this prejudice has been fairly resisted. Mr. Walker has elaborately investigated the existing hypotheses, and *satisfactorily refuted the reasoning of Burke, Hume, Alison, Beattie, Payne Knight, &c.* The work contains a view of the hypotheses of beauty in sculpture and painting, as set forth by Leonardo da Vinci, Winckelmann, Mengs, Bossi and others, and an attempt at that generalization and deduction, by which to form, out of the sifted remnants of their creed, a new one which should be of general acceptation. To this portion of the work, and to *the essay, in the introduction, on the religion of the Greeks,* our unqualified approbation is due."

FROM THE OBSERVER.

"This is, in many respects, a *singular* work. It is evidently the result of extensive research and profound thought. That it has the merit of *originality* no one can doubt: that Mr. Walker is no felon in the case of other men's theories, is proved by every page. Mr. Walker is of opinion that, in relation to woman in particular, beauty is the external sign of goodness in organization and function. Hence he holds that it is of the utmost importance that the female figure become the subject of careful study. It is sure to be popular among philosophers and men of science."

FROM THE LITERARY GAZETTE.

"If ever writer chose an attractive theme, Mr. Walker is certainly that writer. The volume contains a vast fund of *original*, profound, acute, *curious*, and amusing observation, highly interesting to all, but especially to the connoisseur and the artist."

FROM THE COURT MAGAZINE.

"We have read this work with great delight. *The subject is treated in a masterly manner.* To a complete knowledge of the scientific part of his subject, the author adds immense practical information, and an elegance of style rarely found in works of science."

FROM THE SATIRIST.

"We might extend our observations on this elaborately written work to a much greater length. The volume has created a sensation as well in the philosophical as in the fashionable world. *It is written with much force and elegance, and a perfect mastery of the subject discussed.* It

is also illustrated with some exquisite designs after Howard, the Royal Academician. It is not a volume calculated alone for the perusal of literary and scientific men, but may be read with profit and interest by all."

V.

INTERMARRIAGE:

Or, the Mode in which, and the causes why, Beauty, Health, and Intellect result from certain Unions; and Deformity, Disease, and Insanity from others; demonstrated by Delineations of the Structure and Forms, and Descriptions of the Functions and Capacities which each Parent, in every Pair, bestows on Children, — in conformity with certain Natural Laws, and by an Account of corresponding Effects in the Breeding of Animals. Illustrated by Drawings of Parents and Progeny.—Second Edition.—London, 1838, 8vo. pp. 442.

FROM THE BRITISH AND FOREIGN MEDICAL REVIEW.

Edited by Drs. Forbes and Conolly.

"This is, in many respects, *a very remarkable book*. We are not prepared to admit that its author has fulfilled all the expectations excited by his title-page; nor are we disposed to go the whole length with him in the positions he maintains: but he has collected in support of them a mass of facts, many of them as *novel* as they are *unimpeachable*, which renders his volume *alike important and interesting to the physiologist.*

"The Eighth Part of Mr. Walker's Treatise is the winding-up or application of the whole subject, giving directions for "Choice in Intermarriage as prescribed by the natural laws and their modifications." Into the details of this, our limits forbid us to enter; and *we should do injustice to the very ingenious author were we to satisfy the curiosity of all our readers by giving a full abstract.*

"We think that our readers will perceive that Mr. Walker has in this volume made *a valuable contribution to a most interesting and important department of physiology*, by the collection, from authentic sources, of *a mass of facts sufficient to afford a glimpse of general laws, if not to serve for their establishment.* It would be absurd for us or any one else to pronounce a definite opinion on the truth of these laws, without putting them to the test of extensive observation; but, we must say, that we think the evidence adduced in support of them is sufficiently strong to make us desire to see them put to this trial. We must forewarn those,

however, who wish to engage in the pursuit, that *they must make themselves well acquainted with the sources of modification which Mr. Walker has pointed out*, by the attentive study of his book; and if they gain nothing else from its perusal, they will have the advantage of *a valuable collection of facts which may avail much in future enquiries*, as well as of being put on *the right track for their acquirement*. Physiologists have, in too many instances, pursued their enquiries into the laws of nature under the guidance of some preconceived notions which are as likely to lead them wrong as right, and which, at any rate, narrow the boundaries of their investigation. In one or two points, we have been obliged to regard Mr. Walker as prejudiced by his peculiar theories; but, *in the general range of his researches, he has given an example which may justly be imitated by others*, deriving information bearing on the subject from whatever source it has been offered to him. In this point of view, therefore, his work is of much value to the scientific physiologist; and *we cannot but believe that a body of materials might easily be collected from the sources he has indicated, sufficient for the deduction of general principles of unquestionabe supremacy*. We quite agree with Dr. Birkbeck in thinking, that we are much more likely to arrive at "a definite and tangible result" as to the "effect contributed by each sex in the appointed work of reproduction," by "*a comparison of the entire and enlarged being with its producers*," than by profound researches into "the intricacies of the ovaria, uterus, or seminal fluid." Although we are far from wishing to depreciate these last, the questions we have been considering certainly appear to us beyond their power to resolve."

FROM THE NEW YORK JOURNAL OF MEDICINE AND SURGERY.

This *singular* work* is evidently the production of an acute and observing mind, which has entered upon a comparatively *new field of study*. We confess that we are unable to admit all the propositions that it contains, not because they appear contrary to reason, or even to facts, but because the subject is a new one. If we have been startled and amused, rather than instructed, we are far from thinking the subject a mere matter of speculation: we are satisfied that it is not so, but that IT OPENS A PATH OF OBSERVATION WHICH MUST LEAD TO RESULTS OF SIGNAL BENEFIT TO MANKIND.

FROM SHERWOOD'S MONTHLY MISCELLANY.

"This work combines great learning with depth of research, and is of

---

* Reprinted at New York, by J. and H. G. Langley, and Co., 1839. 8vo. pp. 384.

paramount interest. The work is preceded by a very intellectual letter from that philosophical physiologist, Dr. Birkbeck."

FROM THE LITERARY GAZETTE.

"*The newly discovered laws of nature announced in this work, give to man, for the first time, a precise rule for the guidance of intermarriage in his own race, and for that of breeding among animals.*—Here we must stop, for we dare not venture further into Mr. Walker's very uncommon investigations."

VI.

WOMAN PHYSIOLOGICALLY CONSIDERED,

As to Mind, Morals, Marriage, Matrimonial Slavery, Infidelity and Divorce.

This completes the series of works of which the preceding portions are "Beauty" and "Intermarriage."

VII.

Work Preparing for the Press.

DEMONSTRATIVE MORALITY;

Or Effects of Virtuous and of Vicious Habits on Human Form and Structure; a work for Sunday Reading, and Text Book for Sunday Evening Lectures; of which the objects are to withdraw the Minds of the People from the Impracticabilities of Socialism, etc., to render the Church and the Clergy more practically useful, to show the rewards of Virtue and the Punishments of Vice to be Immediate and Obvious, and to Aid in the Production of a vast Moral Revolution. Illustrated by Drawings of the Changes caused by Virtue and by Vice.